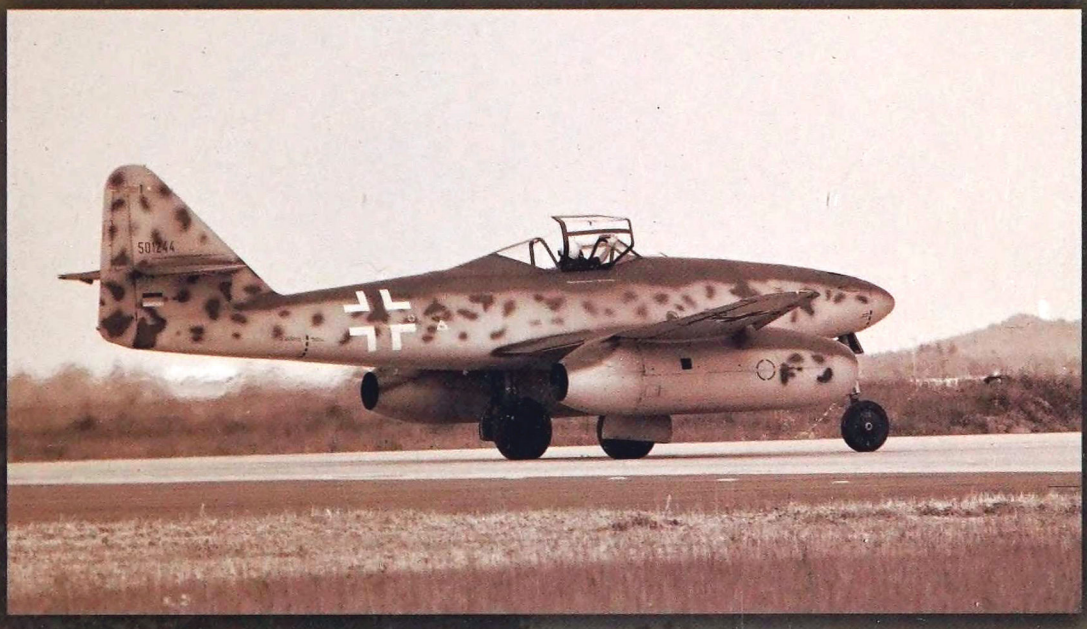
Robert Pęczkowski

Messerschmitt Me 262 A SCHWALBE



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Robert Pęczkowski

Colour illustrations by
Artur Juszczak

Messerschmitt Me 262A Schwalbe

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Editor in chief
Roger Wallsgrove

Editorial Team
Bartłomiej Belcarz
Robert Pęczkowski
Artur Juszczak
Dariusz Karnas
James Kightly

Colour profiles
Artur Juszczak

Scale plans
Dariusz Karnas

3D Drawings
Dariusz Grzywacz

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Stratus s.c.

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Table of contents

Acknowledgements 2
Introduction 3
Technical description 4
Technical Data 5
Me 262 Prototypes 6
Me 262 A Test Beds 7
Production Blocks 8
Me 262 Aces 9
VERSIONS 10
Me 262 A-1a 10
Me 262 A-1a/U1 16
Me 262 A-1a/U4 17
Me 262 A-1a/U5 18
Me 262 A-1a/U2 18
Me 262 A-1b 19
Me 262 A-1a/*Jabo* 20
Me 262 A-2a "*Sturmvogel*" 22
Me 262 A-2a/U1 23
Me 262 A-2a/U2 23
Me 262 A-1/U3 24
Me 262 A-5a 25
Avia S-92 25
Additional Armament 26
Colour Profiles 27
DETAIL PHOTOS 58
General View 58
Fuselage 60
Canopy 66
Cockpit 68
Tail 78
Wings 82
Engines 89
Undercarriage 100
Armament 107
BIBLIOGRAPHY 112

Acknowledgements

The author would like to thank the late **Arthur Lochte**, who had provided much of the material needed to write this book.

Title page: Schwäbisch Hall built Me 262 A-2a, W.Nr. 111711. Test pilot H. Fay flew into Rhein-Main on 30th March 1945, delivering the intact aircraft to the Allies. Aircraft in bare metal finish with brown coloured filler. Note the bomb racks. (US National Archives)

Introduction

The Messerschmitt Me 262, also known under its unofficial name "*Schwalbe*" (Swallow), was the first jet fighter to go into series production, and the first to be used operationally (although the RAF's Gloster Meteor entered squadron service at much the same time, July 1944). Its innovative concept and design also formed a basis for further research and development by German aircraft designers (and indeed by US, Soviet and British design teams post-war). Series production was, however, preceded by many months of testing and development work.

The goal of this book is to present the technical details of the "A" versions of this aircraft. Both series production models and those under development at the end of the war will be covered.

In keeping with other Yellow Series books, we do not propose to give a detailed history of the aircraft's development, nor of its operational use, as these have been covered in detail in many other books. Instead, we have concentrated on portraying all the versions and the differences between them, using 1/72nd scale drawings and many detailed photos, both wartime and of restored and museum examples. The colour schemes and markings worn by single-seat Me 262s are also illustrated.

The Messerschmitt Me 262 A-1a was ready for series production in May 1943. Unfortunately, persistent technical problems with the turbojet engines, even more radical in design than the basic airframe, resulted in considerable delays. It was only in June 1944 that production examples actually became available. From the beginning two basic versions were built in parallel – fighters and bombers. The reason for this dual-track approach was Hitler's personal decree, since he saw the Me 262 as a fast bomber (a *wunderwaffe*) to save Germany from the inevitable invasion by the Allies in the West.

The particular versions of the Me 262 are not presented here in a strictly chronological sequence, as in practice many parallel lines of development were proceeding at once. Instead, we have grouped the variants into three categories: fighters, bombers, and reconnaissance machines.

Me 262 A-2a, W.Nr. 11685, "9K+FH" belonged originally to I./KG 51 before transferring to JV 44. Aircraft was found by US troops close to the München – Salzburg motorway. (US National Archives)

Technical description

The Me 262 jets were twin engine low-wing monoplanes with retractable tricycle undercarriage.

Fuselage of a spherical triangular section was designed as an all-metal half-shell. For technical reason it consisted of three parts. The gun armament and nose-wheel landing gear, together with the opening covers on the upper side, were in the nose section. The bulky central section held front and rear fuel tanks with the pilot's cockpit between them. A three-part cockpit canopy was used, the front windscreen made of 90 mm thick armoured glass, the centre section opened to starboard and the rear section was secured to the fuselage.

The tailplanes and the fin were part of this tail section. The frames were made of metal die-cast pieces to which stringers were riveted. Sheet duralumin of 2 mm thickness was used for the skin, that was riveted to the fuselage frames. Gaps were filled with putty.

Wing: The wing had 17 degree leading edge sweep, with positive dihedral. It was an all metal unit, divided in the middle. Longitudinal structure was made of one I-shaped steel and one I-shaped duralumin spars together with three duralumin U-shaped longerons. Twenty main wing ribs and six auxiliary ones made the transverse structure. The wing was set in the bottom of fuselage and fixed to it by four hinges and 42 bolts of 8 mm diameter. Wing covering was 2 mm thick duralumin sheeting. An exception to this was parts of the undersurface behind the slots, which was made of 0.25 mm steel sheeting. The leading-edge slats were of Handley Page type. Due to the underslung engine cowlings, the slats were divided into inner ones (between the fuselage and cowlings) and outer ones. Slats were made of 1 mm thick steel sheeting. The engine cowlings also divided the hinged wing flaps, of total area 2.08 square meters and moveable from 0 to 55 degrees. Frise type whole metal ailerons had in total 1.19 square meters area, with travel +/-20 degrees. As with the fuselage surface, all gaps between metal panels were putty filled.

Tail: The tail-planes were all-metal. The fin was statically and aerodynamically balanced and the rudder had deflection of 30 degrees. The two spar tailplane was electrically adjustable and its balanced elevator could travel up and down 35 degrees. Flettner tabs were fixed to both tail planes.

Landing gear: The retractable tricycle landing gear was equipped with oleo-pneumatic shock absorbers. The front shock absorber was operating under a pressure of 0.987 MPa, the main shock absorber pressure was 1.974 MPa. The wheels of the main undercarriage, 840 x 300 mm, had pedal operated brakes, the nose wheel of 600 x 160 mm size had a hand brake. Main tyre pressure was 0.444 Mpa and 0.493 Mpa in the front wheel tyre.

The engines were two M-04 (Junkers Jumo 109-004-B-1) axial-flow jet engines. The M-04 consisted of an eight-row axial compressor, six combustion chambers and an axial turbine that had a rotor with 61 blades. Engine output was 19.5 kg/s at 8,700 rpm and compression ratio 3.0:1. Diameter of the exhaust nozzle was regulated by a movable needle that was automatically controlled by a centrifugal regulator. Starting was by a two-stroke Reidel engine of 270cc capacity, 30 mm stroke, 70 mm bore and maximal output up to 10,000 rpm. Maximum engine surface thrust was 8.7 kN at 8,700 rpm and exhaust-turbine temperature 610°C. Specific fuel consumption was 1.32 – 1.4 kg/kp/h. M-04 engine diameter was 760 mm, it was 3.86 m long and weighed 740 kg. Fuel system comprised four fuel tanks, and two fire-stop valves controlled from the cockpit. Two main rubber fuel tanks of capacity 900 litres each were placed in front of and behind the cockpit. The lower auxiliary tank of 170 litre capacity was placed just in front of main wing spar and the rear auxiliary 580 litre tank was placed in the fuselage just behind the rear main tank. The fire-stop valves were hand-controlled from the cockpit and made possible different fuel supply to the engines, fuel was pumped from the auxiliary tanks to the main tanks and from there by two electric pumps to each engine Two 17 litre tanks of fuel (87 Oct petrol + 3% by volume lubrication oil) for the Riedel starter motors and two 12 litre oil tanks were placed in the front parts of the engine cowlings. Aviation kerosene fuel, LRX, fed the M-04 engines that had a closed circulation system without an oil pump. Oil was cooled in the upper part of the oil tank by air running from the compressor.

Hydraulic, air, oxygen and electric systems. The hydraulic set-up controlled landing gear and flap retraction and extension, and the oil-tank for this system was placed on the port fuselage side at the wing root. The pumps were on both engines, contrary to the original German design, where it was placed only next to the port engine. The system was also secured against lowering the flaps before extension of the landing gear.

A compressed air system was used to lower the undercarriage in an emergency, and for control of flaps and gun cocking. Eight compressed air cylinders pressurised to 14.805 Mpa were placed at the internal frame between the front and central fuselage parts. Pilot's oxygen kit was supplied from two 14.805 Mpa cylinders placed in the tail section.

The electric system was 24 V, supplied by two 3000 W dynamos and one battery of 20 Ah capacity.

Radio system comprised the FuG 16ZY (LR/16ZY) designed for transmission of pilot to ground or aircraft to aircraft communication. The radio-compass was part of this set-up. A separate system with the FuG 25A (LR-25A) was used for IFF.

Armament: Me 262 As carried four guns, The guns were Rheinmetal-Borsig MK 108s of 30 mm calibre, 1.057 m length,

weight 58 kg, rate of fire 660 projectiles/min at muzzle speed 520 m/sec. Firing was electro-pneumatic, controlled by a KG13b push button on the control column. The lower guns had 80 rounds per gun, the upper ones 100. Cartridge weight was 380 grams and the belt cartridge link weighed 70 grams. Gun apertures of the unarmed versions were covered by metal covers and instead of guns carried ballast. A Revi 16B gunsight was placed in the cockpit just above the control panel. The camera gun was fitted, a CG 45 weighing 2.5 kg. The As could carry two bomb racks for SC 250 or SD 250 bombs, each weighing 250 kg. Eight ESN signal cartridges were placed in a special box on the port fuselage side between the cockpit and the fin.

Technical Data

	Me 262 A-1a fighter	Me 262 A-1a fighter–bomber with SC 500 bomb
Wing span	12.56 m (41.2 ft)	12.56 m (41.2 ft)
Wing area	21.7 m^2 (233.6 ft^2)	21.7 m^2 (233.6 ft^2)
Length	10.6 m (34.8 ft)	10.6 m (34.8 ft)
Wheel track	2.33 m (7.6 ft)	2.33 m (7.6 ft)
Height	3.83 m (12.6 ft)	3.83 m (12.6 ft)
Equipped weight	4,120 kg (9,083 lb)	4,150 kg (9,149 lb)
Maximum speed		
at sea level	800 km/h (497.1 mph)	718 km/h (446.1 mph)
at 6,000 m (20,000 ft)	870 km/h (540.6 mph)	750 km/h (466 mph)
at 9,000 m (30,000 ft)	845 km/h (770.1 mph)	685 km/h (425.6 mph)
Climbing speed		
at sea level	19.3 m/s (63.32 ft/s)	14.9 m/s (48.88 ft/s)
at 6,000 m (20,000 ft)	10.0 m/s (32.81 ft/s)	7.0 m/s (22.97 ft/s)
at 9,000 m (30,000 ft)	5.2 m/s (17.06 ft/s)	3.0 m/s (9.84 ft/s)
Climbing time		
to 6,000 m (20,000 ft)	7.0 minutes	9.3 minutes
to 9.000 m (30,000 ft)	14.0 minutes	19.9 minutes
Service Ceiling (5,100 kg) (11,240 lb)	11,800 m (38,700 ft)	10,500 m (34,450 ft)
Normal range – maximum range		
at sea level	290 – 360 km (180 – 224 mi)	270 – 330 km (168 – 205 mi)
at 6,000 m (20,000 ft)	520 – 600 km (323 – 373 mi)	475 – 550 km (295 – 342 mi)
at 9,000 m (30,000 ft)	644 – 710 km (400 – 441 mi)	–
Take off run with 100% thrust	920 m (1,000 yd)	1,050 m (1,150 yd)
Take off run with two 500 kg RATO	540 m (590 yd)	630 m (690 yd)
Landing speed	182 km/h (113 mph)	182 km/h (113 mph)

Fuselage of unfinished Me 262 found by US troops close to the Obertraubling "factory" just south of Regensburg, Germany. (US National Archives)

Me 262 Prototypes

Prototype	Code letters	Serial Number	First Flight	Used by	Remarks
Me 262 V1	PC+UA	-	27.03.1942	Messerschmitt AG	Crashed on 07.06.1944
Me 262 V2	PC+UB	-	01.10.1942	Messerschmitt AG	Crashed on 18.04.1943
Me 262 V3	PC+UC	-	17.07.1942	Messerschmitt AG	Destroyed during air raid in September 1944
Me 262 V4	PC+UD	-	15.05.1943	Messerschmitt AG	Broken on 26.07.1943
Me 262 V5	PC+UE	-	07.06.1943	Messerschmitt AG	Crashed on 01.02.1944
Me 262 V6	VI+AA	130001	17.10.1943	Messerschmitt AG	Crashed on 08.03.1944
Me 262 V7	VI+AB	130002	20.12.1943	Messerschmitt AG	Crashed on 19.05.1944
Me 262 V8	VI+AC	130003	15.12.1943	1./KG 51	Sent to the combat unit
Me 262 V9	VI+AD	130004	19.01.1944	Lachfeld	Still airworthy in 1945
Me 262 V10	VI+AE	130005	01.04.1944	EK 262	Still airworthy in 1945
Preproduction aircraft					
Me 262 S1	VI+AF	130006	March 1944	EK 262	Damaged in April 1944
Me 262 S2	VI+AG	130007	April 1944	EK 262	Damaged in June 1944
Me 262 S3	VI+AH	130008	April 1944	EK 262	Damaged in April 1944
Me 262 S4	VI+AI	130009	May 1944	Messerschmitt AG	Damaged in April 1944
Me 262 S5	VI+AJ	1300010	May 1944	Erprobunngsstell Rechlin-Lärz	Crashed on 08.10.1944
Me 262 S6	VI+AK	1300011	May 1944	EK 262	Damaged in May 1944
Me 262 S7	VI+AL	1300012	May 1944	?	Built at Leipheim
Me 262 S8	VI+AM	1300013	May 1944	Messerschmitt AG	Destroyed during air raid on 19.07.1944
Me 262 S9	VI+AN	1300014	May 1944	?	Built at Leipheim
Me 262 S10	VI+AO	1300015	May 1944	Messerschmitt AG	Still airworthy in 1945
Me 262 S11	VI+AP	1300016	May 1944	?	Built at Leipheim
Me 262 S12	VI+AQ	1300017	May 1944	EK 262	Broken in October 1944
Me 262 S13	VI+AR	1300018	June 1944	Erprobunngsstell Rechlin-Lärz	Broken in October 1944
Me 262 S14	VI+AS	1300019	June 1944	1./KG 51	Sent to the combat unit
Me 262 S15	VI+AT	1300020	June 1944	EK 262	Crashed in January 1945

Me 262 A Test Beds

Werk Nr.	Code Letters	Task of the tests	Designation
110484		*Lotfekanzel*, course control (second V 8)	Me 262 A-2a/U2
110555		*Lotfekanzel* II, peilversuche (V 11)	Me 262 A-2a/U2
111355		increased armament to 6 Mk 108	Me 262 A-1a/U5
111538		*Hochgeschwindigkeitsjäger*, (High-speed fighter)	HG II
111857		Improved production aircraft	
111899		Mk 214 armament	Me 262 A-1a/U4
111994		Aircraft with WGr. 21, R 100	Me 262 A-1a/R1
130018	E3+01	Engine test bed (Jumo) (S 13)	Me 262 A-1a
130184		Engine test bed (BMW) ä	Me 262 A-1b
130163	E2+01	Undercarriage tests	Me 262 A-1a
130164	WA+TA	Armament and TSA tests	Me 262 A-1a
130165	E4+E5	Hydraulic system and FT tests	Me 262 A-1a
130167	SQ+WF	External tanks and air brakes test (second V5)	Me 262 A-1a
130168	E3+O2	Engine elevator testing	Me 262 A-1a
130170	E2+O2	Performance testing	Me 262 A-2a/U1
130172	EK+L1	Fuel test	Me 262 A-1a
130174	EK+L2	Developing tests, as above	Me 262 A-1a
1130175		General flight testing	Me 262 A-1a
130186		2nd V6, C-1a, *Heimatschutzer* I	Me 262 C-1a
130188	E7+O1	Dive visor testing, TSA, BZA	
130189		Flight testing	Me 262 A-1a
170038	E3+O3	Engine test bed (Junkers)	Me 262 A-1a
170039	EK+L3	Developing tests, as above	Me 262 A-1a
170056		Engine starting assistance, FuG 218, 226	Me 262 A-1a
170057	WA+O2	Weapon testing	Me 262 A-1a
170070	E7+O2	Bomb gunsight trials, TSA	Me 262 A-1a/*Jabo*
170074		V12, C-2b, *Heimatschutzer* II	Me 262 C-2b
170078		Engine test bed (BMW)	Me 262 A-1b
170079		?	
170083		Second V4, Mk 214 installation and taxi testing	Me 262 A-1a/U4
170086		Stability and external container tests	Me 262 A-1a
170095		NJ – chassis testing	Me 262 A-1a
170303		Second V7, test with bombs load up to 1000 kg	Me 262 A-1a/*Jabo*
170394		?	

Production Blocks

Production Block	Final Assembly
110361–110385	Schwäbisch Hall
110386–110410	Leipheim
110411–110430	Schwäbisch Hall
110466–110470	Schwäbisch Hall
110471–110495	Leipheim
110496–110520	Schwäbisch Hall
110521–110545	Leipheim
110546–110570	Schwäbisch Hall
110571–110595	Leipheim
110596–110620	Schwäbisch Hall
110621–110645	Leipheim
110646–110669	Schwäbisch Hall
110718	Schwäbisch Hall
110719–110743	Leipheim
110744–110768	Kuno I
110769–110843	Leipheim
110911–110960	Schwäbisch Hall
110961–110999	Leipheim
110000–110011	Leipheim
111538–111636	Leipheim
111637–111736	Schwäbisch Hall
111737–111811	Kuno I

Production Block	Final Assembly
111812–111886	Schwäbish Hall
111887–112000	Leipheim
112311–112414	Leipheim
113046–113???	Leipheim
113???–113394	Leipheim
113395–113694	Schwäbish Hall
113695–113728	Leipheim
130011–130027	Leipheim
130163–130165	Leipheim
130166–130185	Schwäbish Hall
130186–130190	Leipheim
170001–170015	Leipheim
170016–170017	Schwäbish Hall
170036–170053	Schwäbish Hall
170054–170073	Leipheim
170074–170093	Schwäbish Hall
170094–170118	Leipheim
170119–170124	Schwäbish Hall
170269–170287	Schwäbish Hall
170288–170312	Leipheim
500001–	Obertraubling
501001–	Obertraubling

Messerschmitt AG Augsburg including Leipheim, Kuno I and Schwäbisch Hall final assembly factories.
Messerschmitt AG Ragensburg including Obertraubling Neuburg-Donau Hall final assembly factories.
Versions built in Ragensburg: Me 262 A-1, Me 262 A-2.
Me 262 in reconnaissance versions were converted from A-2 versions in Budweis (České Budějovice, Czechoslovakia) from 500000 block.

Production numbers.

Year	1944		1945	
	Factory Augsburg	Factory Regensburg	Factory Augsburg	Factory Regensburg
January			163	65
February			166	130
March	1		165	75
April	15		64	37
May	7			
June	28			
July	58			
August	15			
September	92	2		
October	108	10		
November	87	14		
December	108	23		

Me 262 Aces

Pilot	Me 262 victories	Total number of victories	Unit
Maj. Georg-Peter Eder	25	78	Ekdo 262, Kdo Nowotny, JG 7
Lt. Rudolf Rademacher	24	126	JG7
Oblt. Franz Schall	18	137	Kdo Nowotny, JG 7
Obstlt. Heinz Bar	16	220	EJG 2, JV 44
Maj. Erich Rudorffer	14	222	JG7
Ofw. Hermann Buchner	12	58	Kdo Nowotny, JG 7
Lt. Karl Schnorrer	11	46	Ekdo 262, Kdo Nowotny, JG 7
Lt. Fritz Stehle	11	26	JG7
Lt. Hubert Gobel	9	10	JG7
Fw. Helmut Lennartz	9	11	Kdo Nowotny, JG 7
Lt. Fritz Miiller	9	22	JG7
Lt. Joachim Weber	9	9	Kdo Nowotny, JG 7
Lt. Hans-Oieter Weihs	9	9	JG 7
Ofw. Erich Buttner	8	8	JG7
Maj. Heinrich Ehrler	8	205	JG7
Genlt. Adolf Galland	8	104	JV44
Fw. Otto Pritzl	8	18	JG7
Oblt. Walter Schuck	8	206	JG7
Oblt. Gunther Wegmann	8	21	Ekdo 262, JG 7
Maj. Theodor Weissenberger	8	208	JG7
Uffz. Anton Schoppler	7	13	JG7
Fhr. Ernst Pfeiffer	7	7	JG7
Uffz. Ernest Richter	7	7	KG(J) 54
Lt. Alfred Ambs	7	7	JG7
Ofw. Heinz Arnold	7	49	JG7
Uffz. Peter Koster	7	7	EJG 2, JG 7, JV 44
Lt. Alfred Schreiber	7	7	Kdo Nowotny, JG 7
Obst. Johannes Steinhoff	6	176	JG 7, JV 44
Ofw. Helmut Baudach	5	20	Kdo Nowotny, JG 7
Ofhr. Walter Windisch	5	7	JG7
Lt. Klaus Neumann	5	37	JG 7, JV 44
Uffz. Edward Schallmoser	5	5	JV44
Maj. Wolfgang Spate	5	99	JV7
Lt. Bruno Mischkot	5	7	EJG 2, JG 7
Fhr. Friedrich Ehrig	5	39	JG7
Oblt. Hans Griinberg	5	82	JG7, JV44
Lt. Rudolf Harbort	5	60	EJG 2, JG 7
Gfr. Fritz Heim	5	5	JG7

Based on Seweryn Fleischer's research

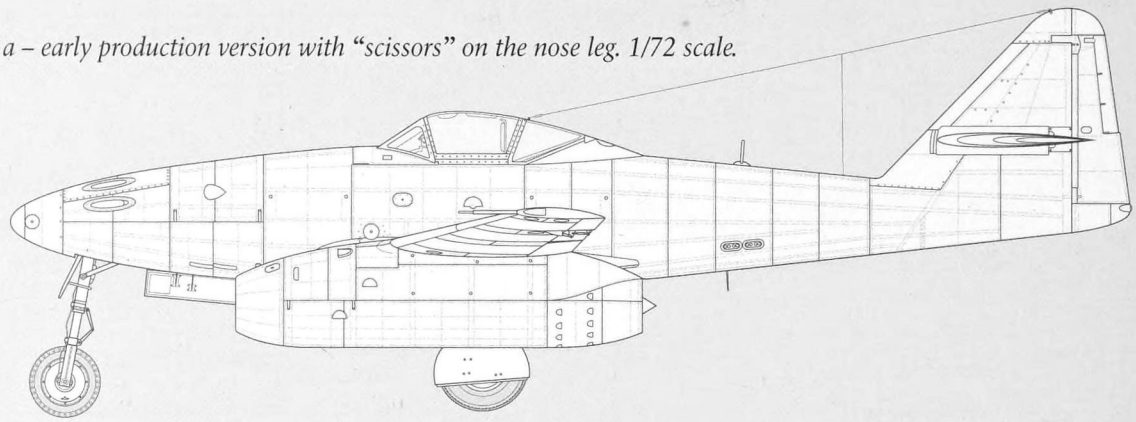
VERSIONS

Me 262 A-1a

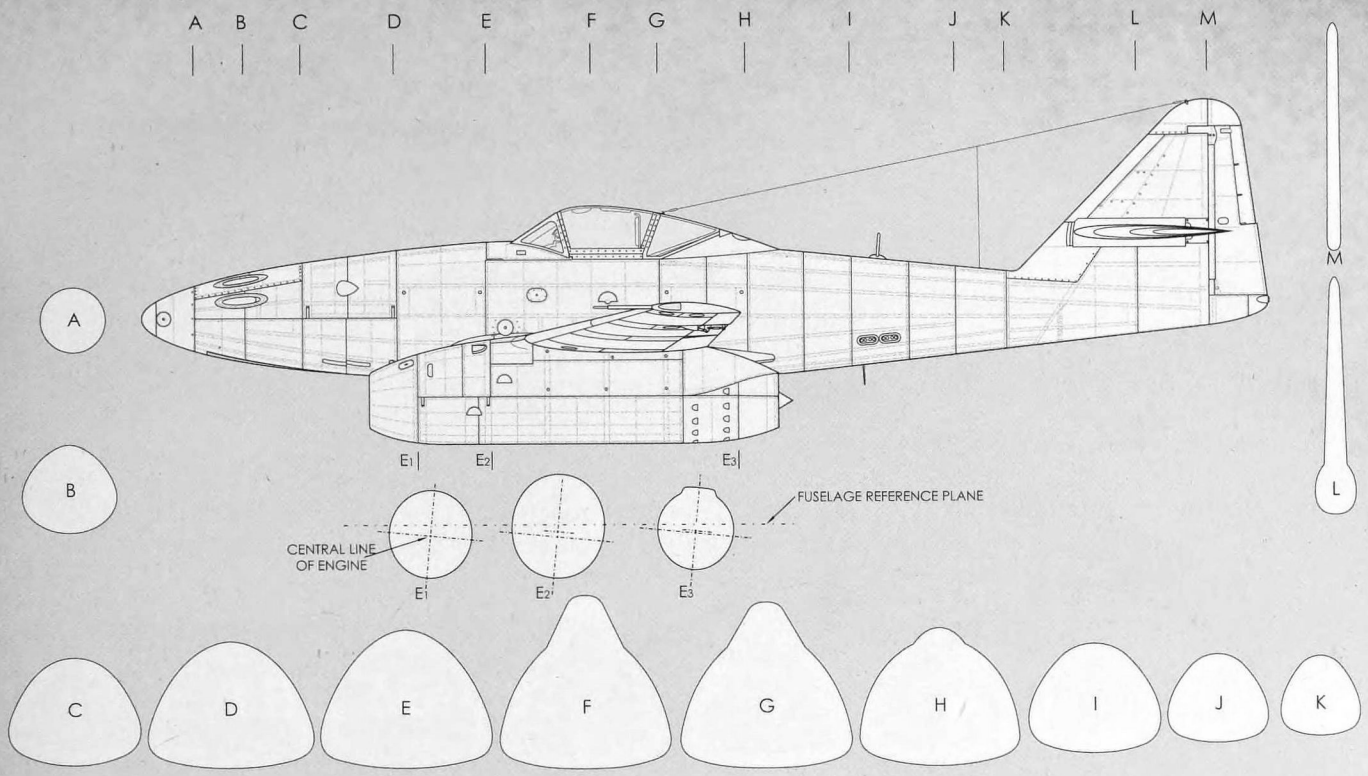
This was the very first fighter version to go into production, in June 1944, alongside the first bomber version. Both models remained in production until the end of the war, with later aircraft being powered by the Jumo 004B-4, which featured hollow, air-cooled turbine blades. Armament consisted of four MK108 30mm cannons, with a total of 360 rounds. The aircraft was fitted with a Revi 16B gun sight. Fuel (aircraft grade kerosene type J-2) was carried in fuselage and wing tanks with a total capacity of 2,270 litres.

It is difficult to give a precise figure for production, as many aircraft were converted to the Me 262A-1a/*Jabo* version, with bomb racks.

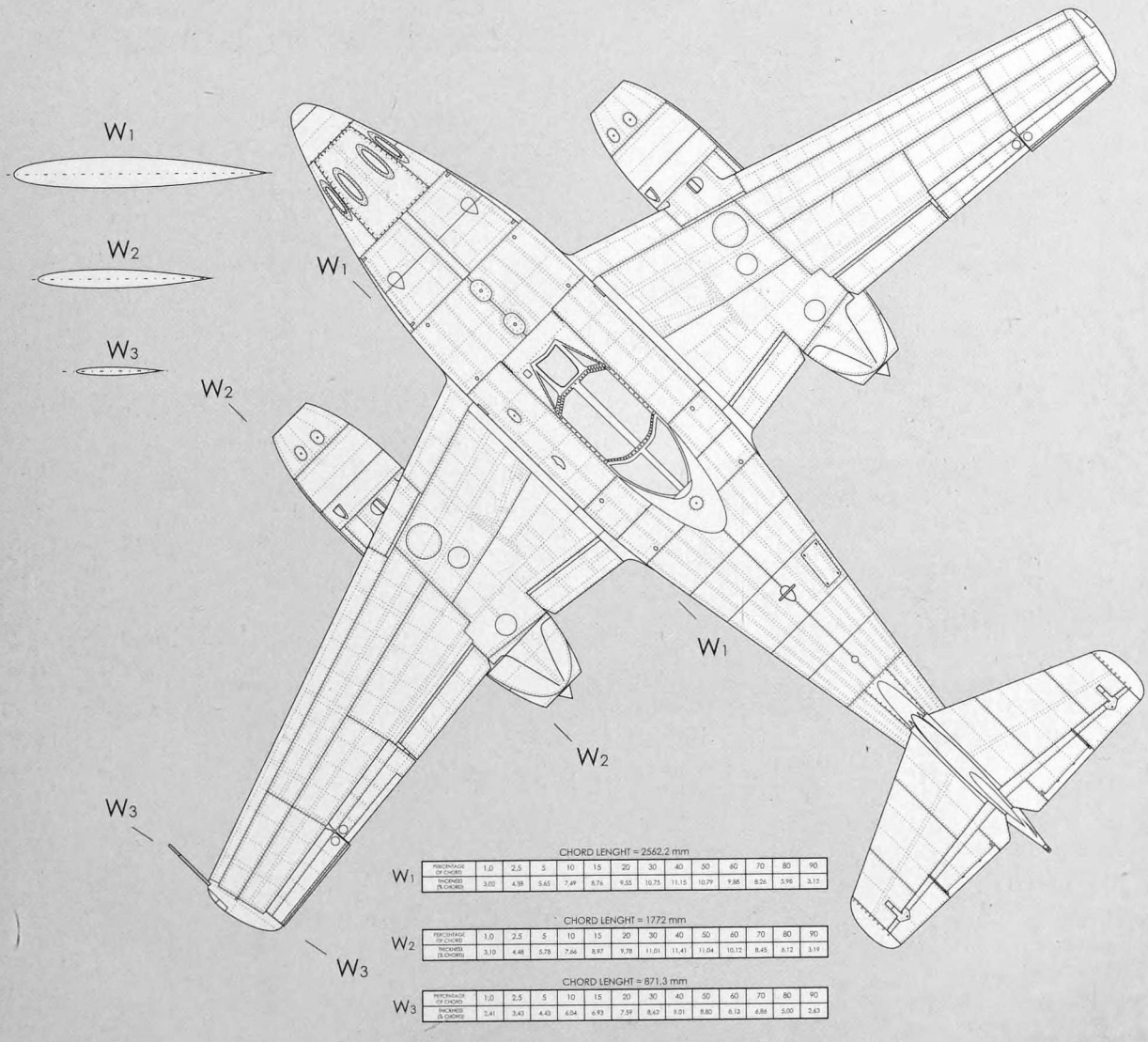
Me 262 A-1a – early production version with "scissors" on the nose leg. 1/72 scale.

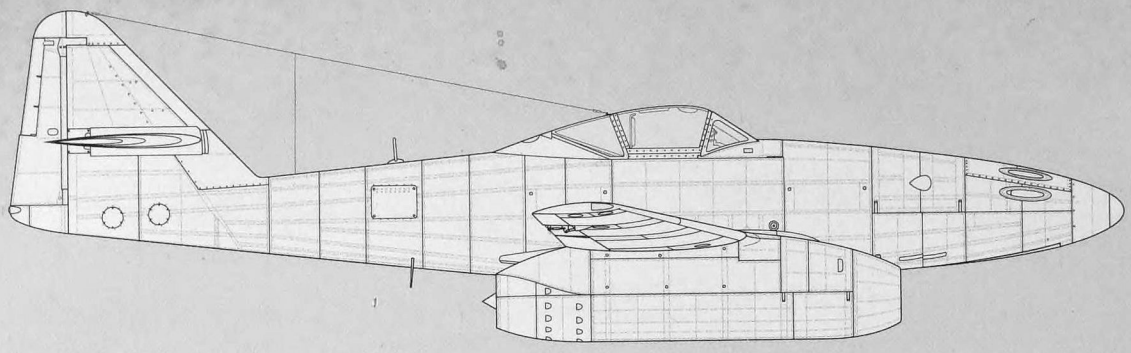


Very well known photo of late production Me 262 A-1 W.Nr. 112385 of 3./JG 7. Aircraft was found by US troops near Stendal on 15 April 1945. (US National Archives)

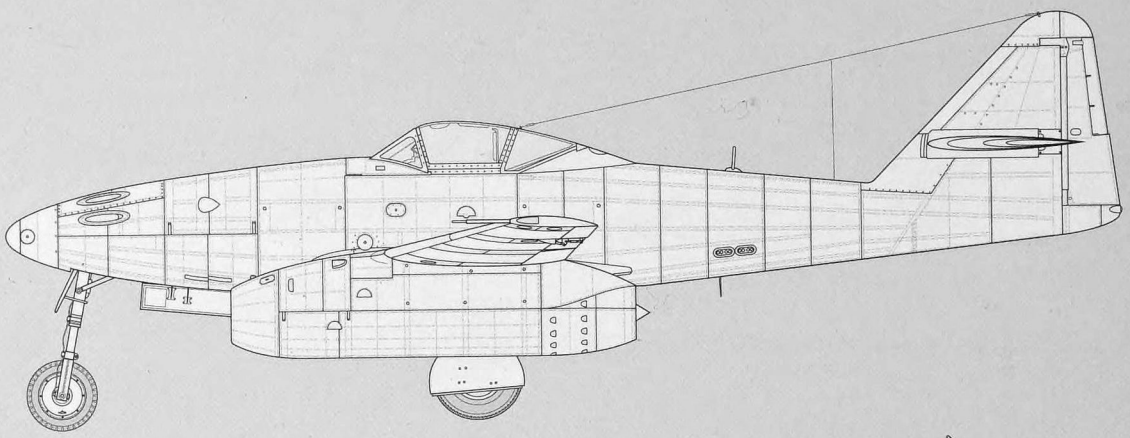


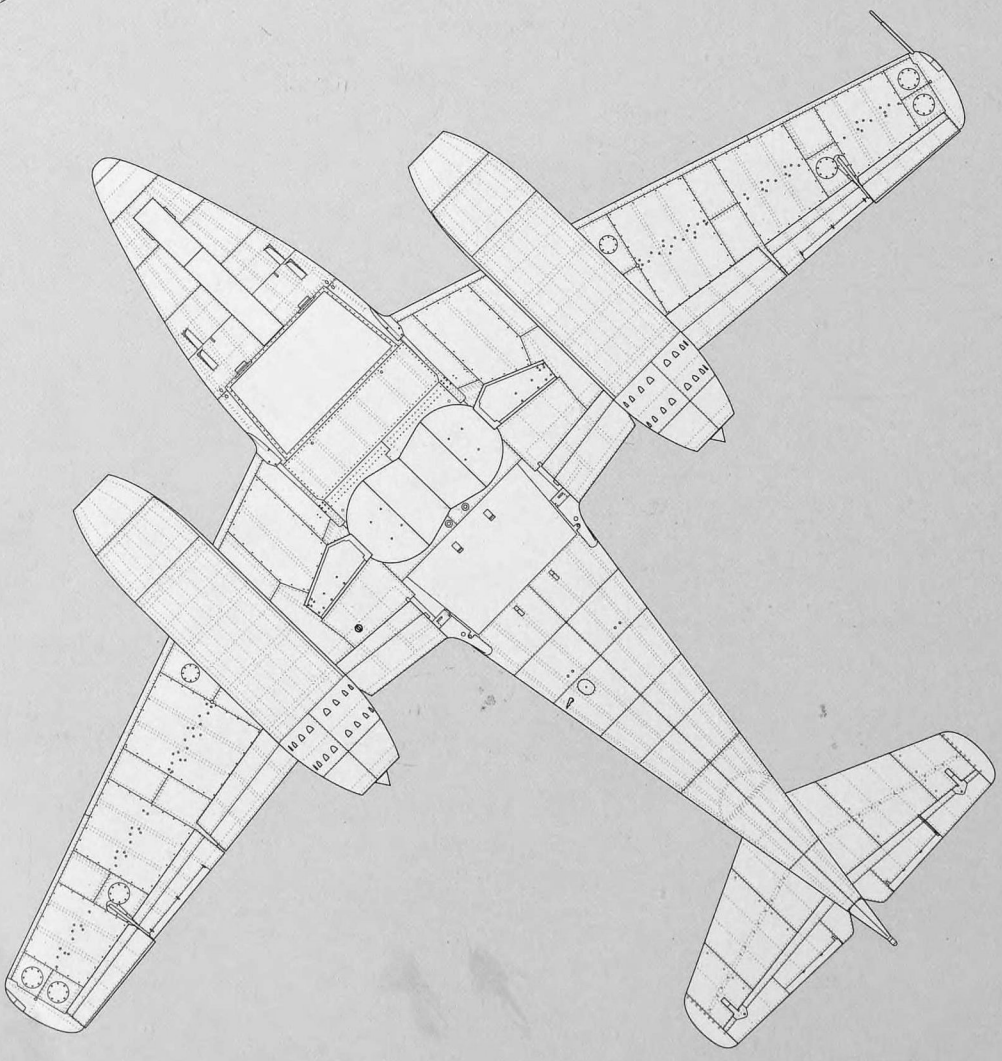
Me 262 A-1a scale plans. 1/72 scale.



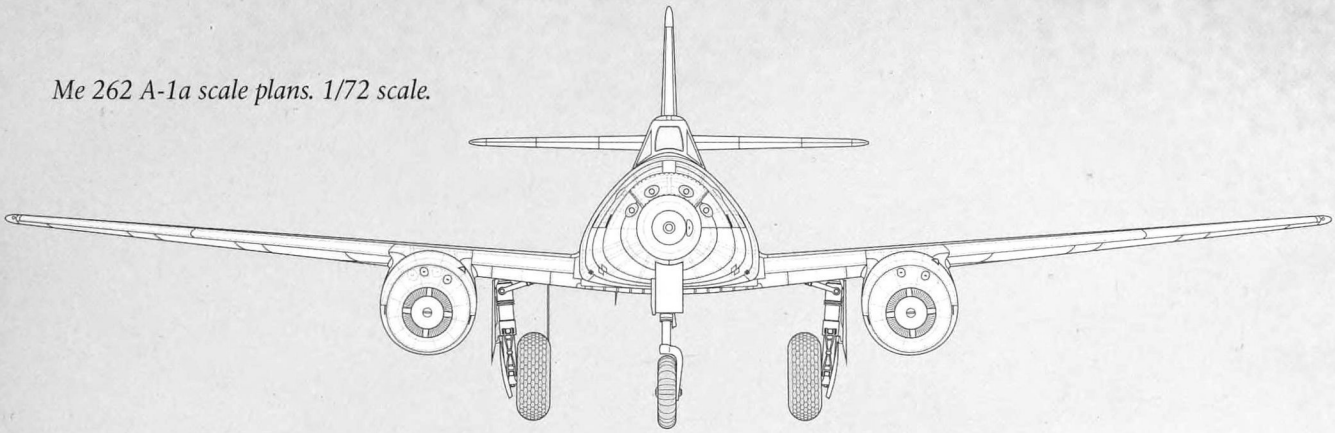


Me 262 A-1a scale plans. 1/72 scale.

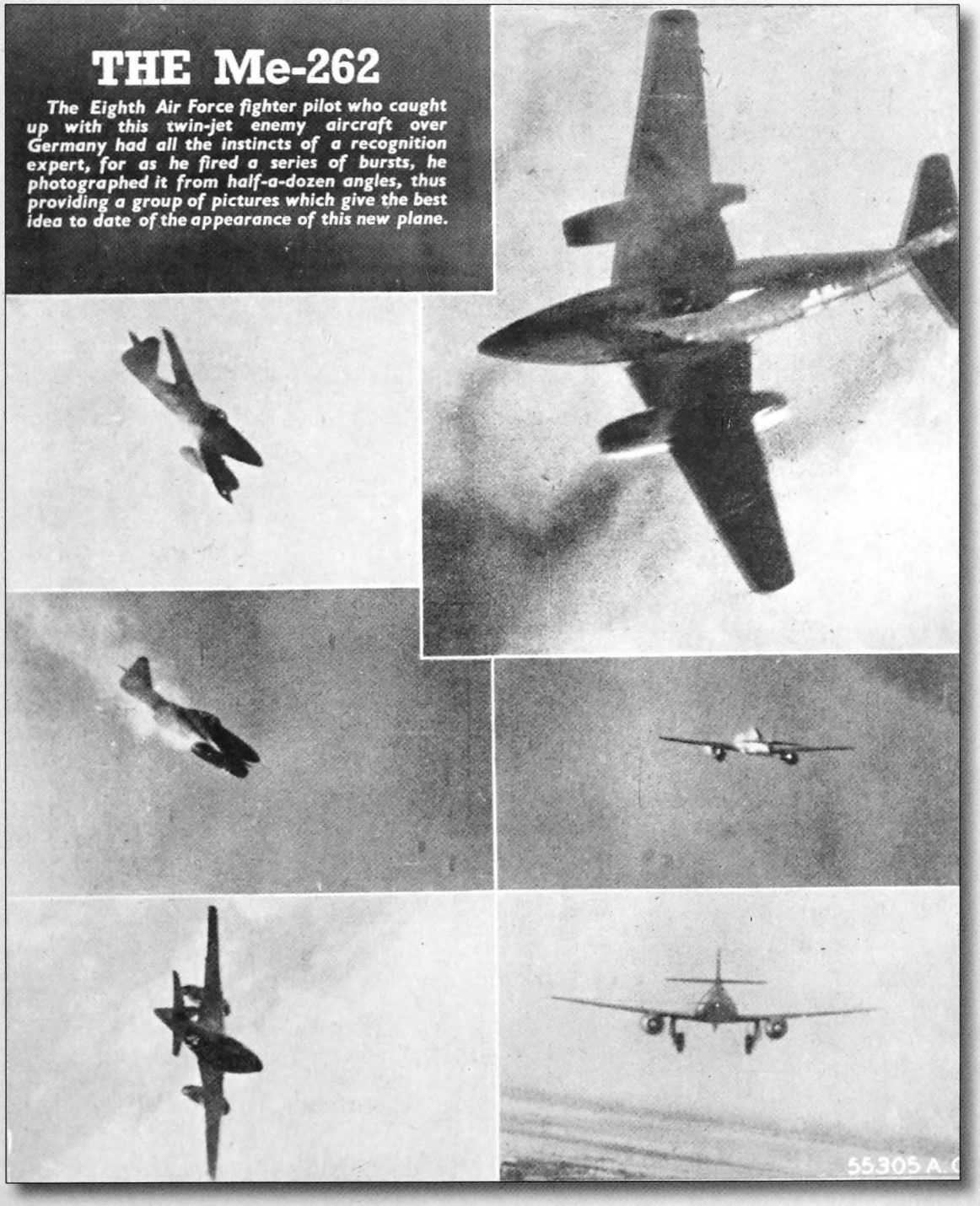


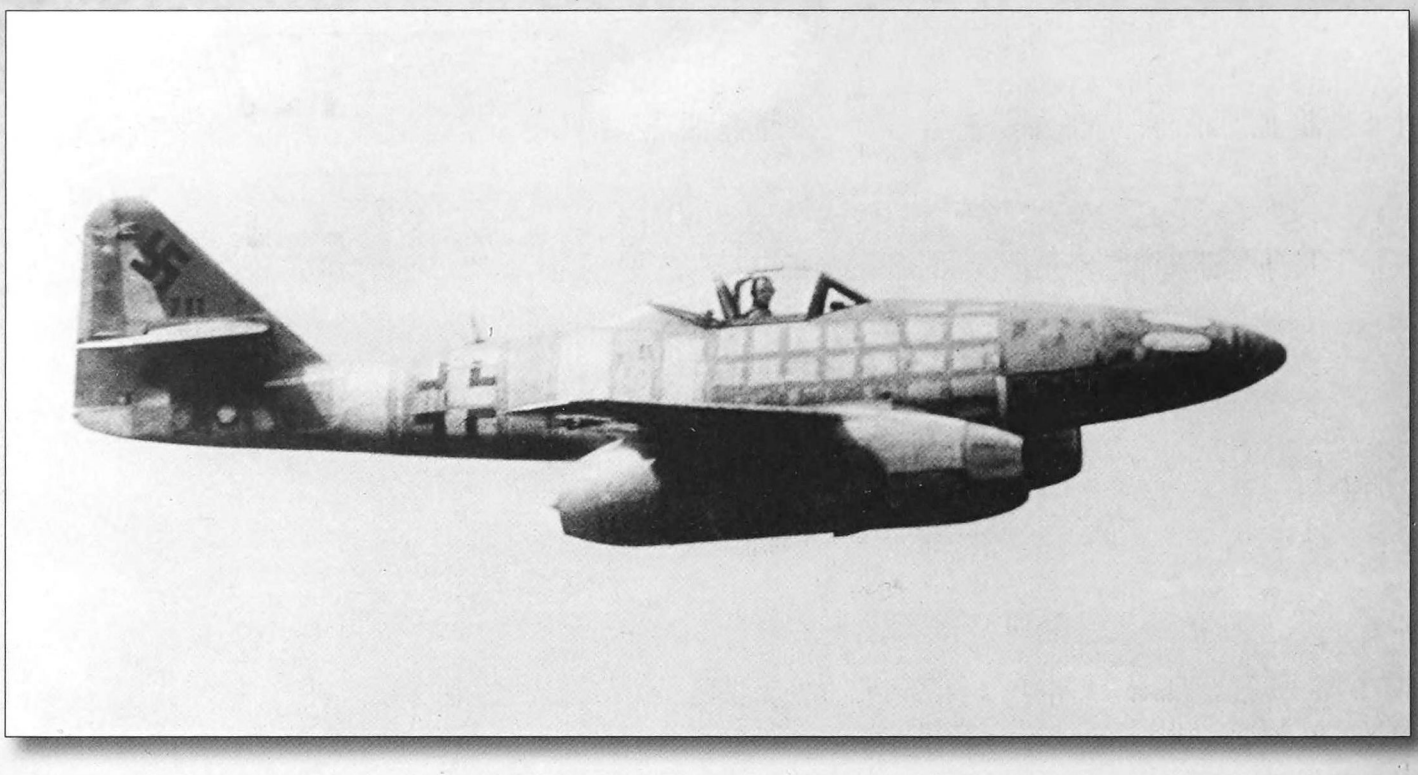


Me 262 A-1a scale plans. 1/72 scale.



Official US Air Force document showing the appearance of the new Me 262 for US pilots. (US National Archives)


THE Me-262
The Eighth Air Force fighter pilot who caught up with this twin-jet enemy aircraft over Germany had all the instincts of a recognition expert, for as he fired a series of bursts, he photographed it from half-a-dozen angles, thus providing a group of pictures which give the best idea to date of the appearance of this new plane.
55305 A.C



Above: Me 262 A-1, W.Nr. 111711, built at Schwäbisch Hall in flight with US pilot. (US National Archives)

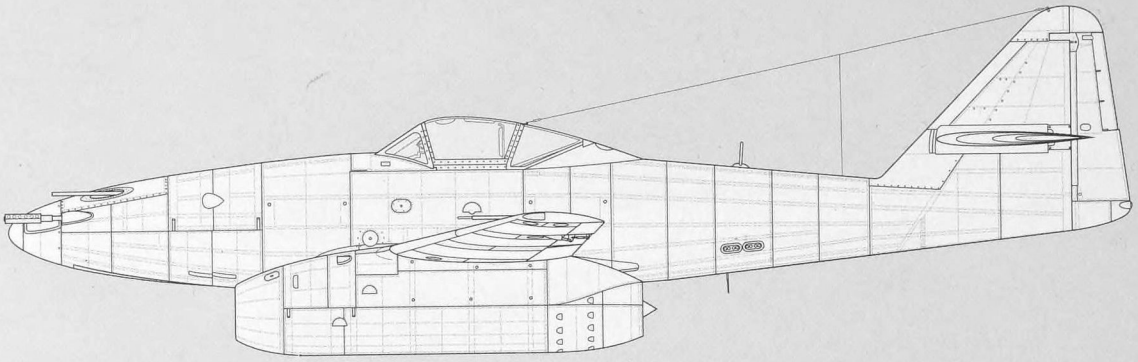
Below: The same aircraft as was found by US troop. (US National Archives)

Above: *Partially finished Me 262 As found by US troops at Messerschmitt's final assembly plant at Obertraubling, April 1945. (US National archives)*

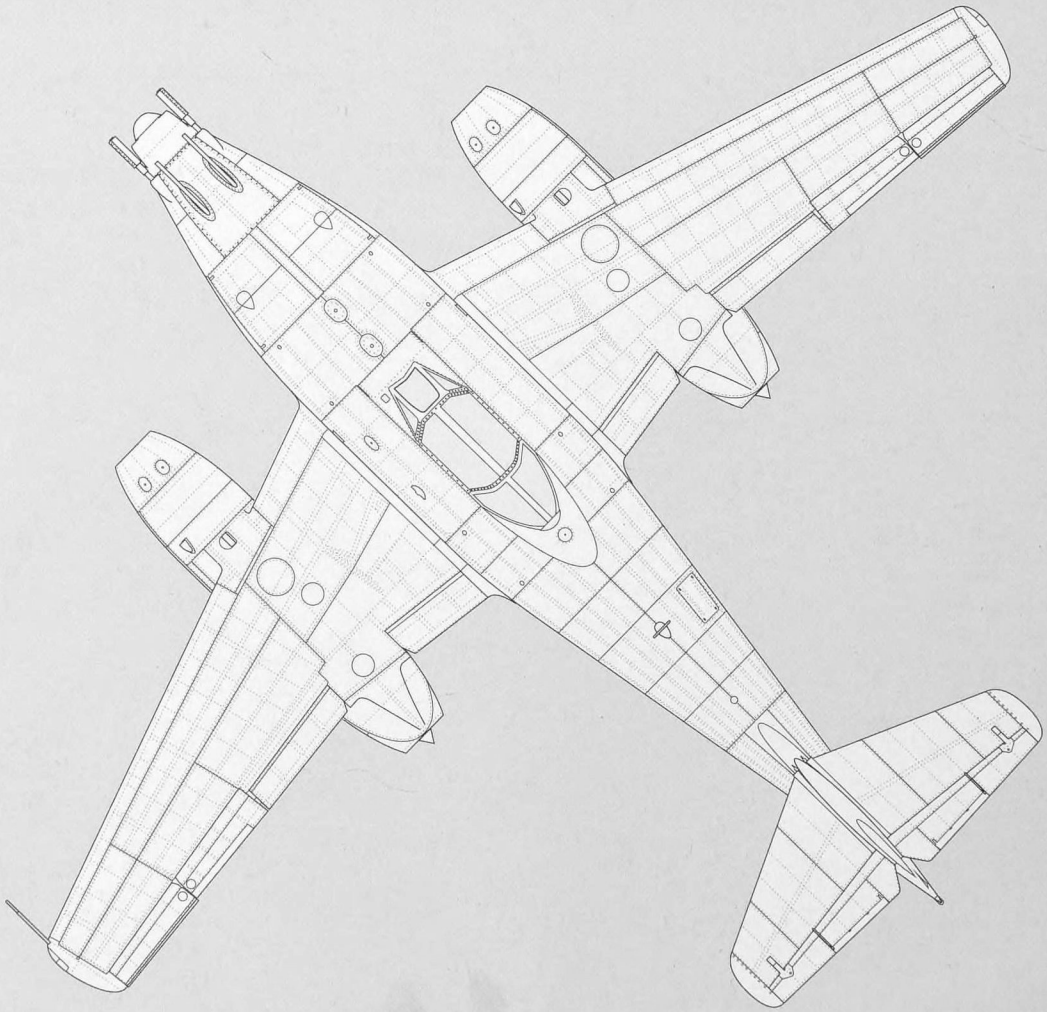
Below: *The prototype of Avia S-92.1 (Me 262 A-1a) during test flights in summer 1946. (B. Kudlička coll.). See also page 25.*

Me 262 A-1a/U1

Continuing work on increasing the firepower (as if the basic armament was not enough) resulted in a new version armed with two MG151/20 20mm cannon with 146rpg, two MK108 30mm cannon with 66rpg, and two MK103 30mm cannon with 72rpg. Either one or three such aircraft were completed.



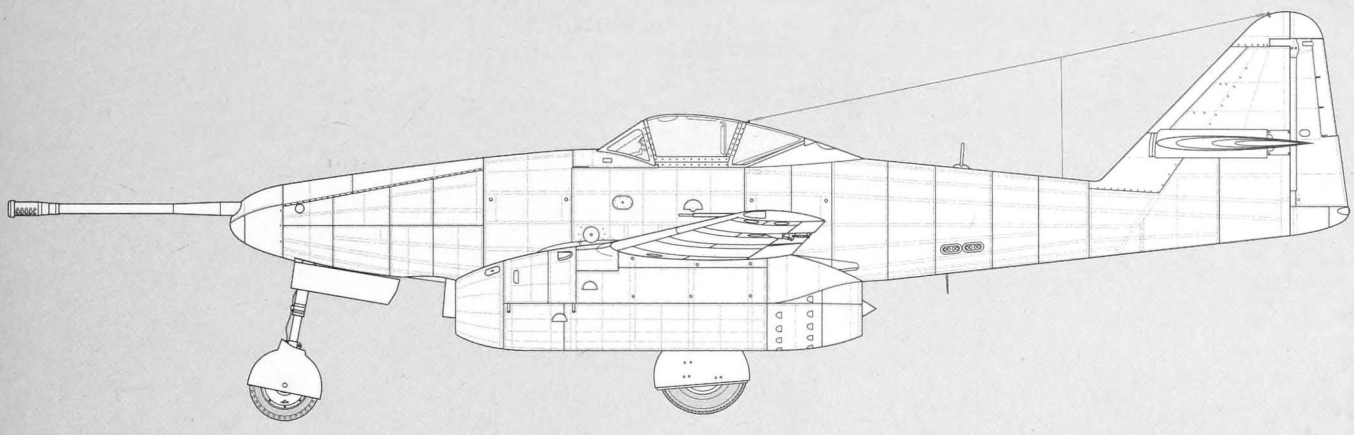
Me 262 A-1a/U1 scale plans. 1/72 scale.



Me 262 A-1a/U4

In pursuit of increased firepower, a version was developed with a single Mauser MK 214 50mm cannon. Initially it was proposed to install a Rheinmetal BK5 cannon of the same size, but it was the Mauser which was finally used. By the end of Feb 1945 one aircraft had been converted, and was commonly known as the *Pulzerstörer*. The cannon barrel protruded some two metres ahead of the nose, and because of the gun's bulky breech mechanism the nosewheel had to be modified to turn 90 degrees on retraction, to lie flat under the fuselage. By the end of the war, another aircraft had been similarly converted.

Me 262 A-1a/U4 side view. 1/72 scale.



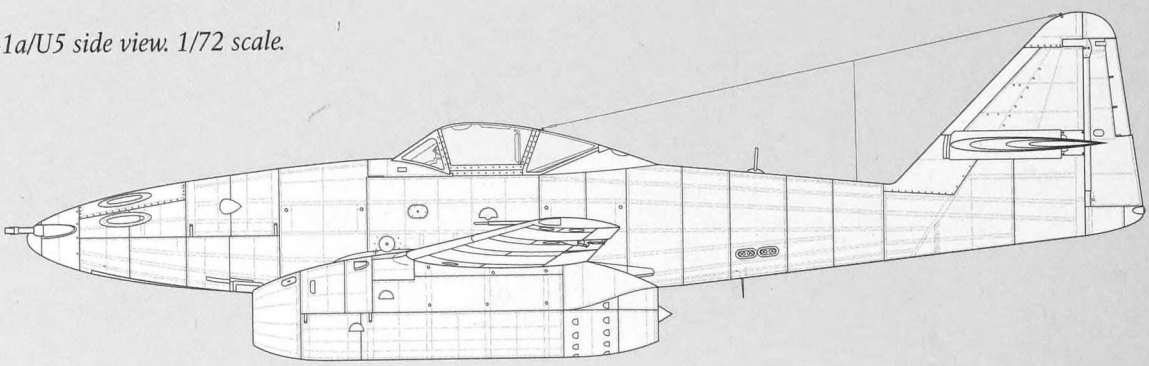
Left: Me 262 A-1a/U4 W.Nr. 170083 at Ankunft in American markings.

***Below:** Me 262 A-1a/U4 examined by American troops somewhere in Germany. (Both photos Stratus coll.)*

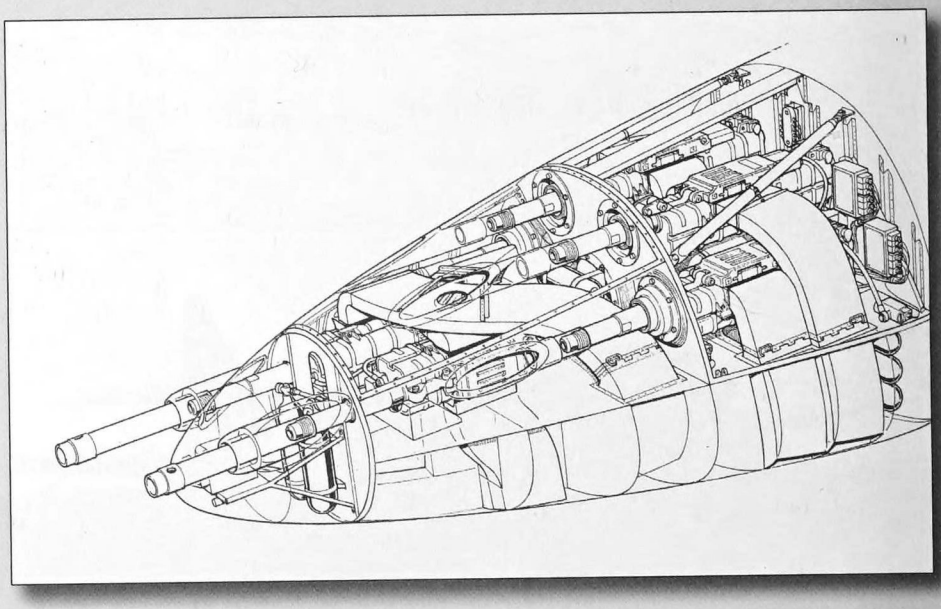
Me 262 A-1a/U5

A subsequent version of the *Schwalbe* with increased armament. In this case, sporting the additional two MK 108 cannons installed below the existing four. One aircraft was built (W.Nr. 112355) in this configuration and was test in March/April 1945, flown operational sorties with JV 44.

Me 262 A-1a/U5 side view. 1/72 scale.



***Right:** Drawing of the armament arrangement. (Me 262 Handbuch)*



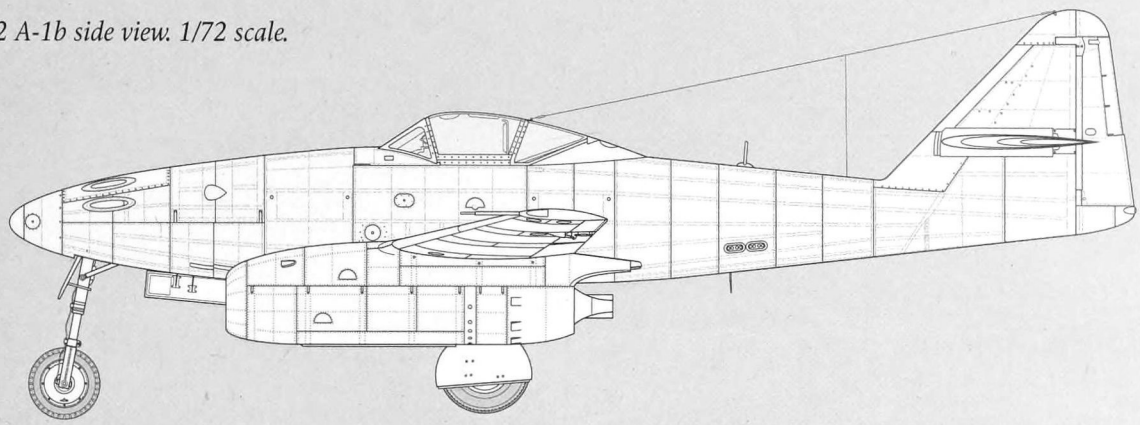
Me 262 A-1a/U2

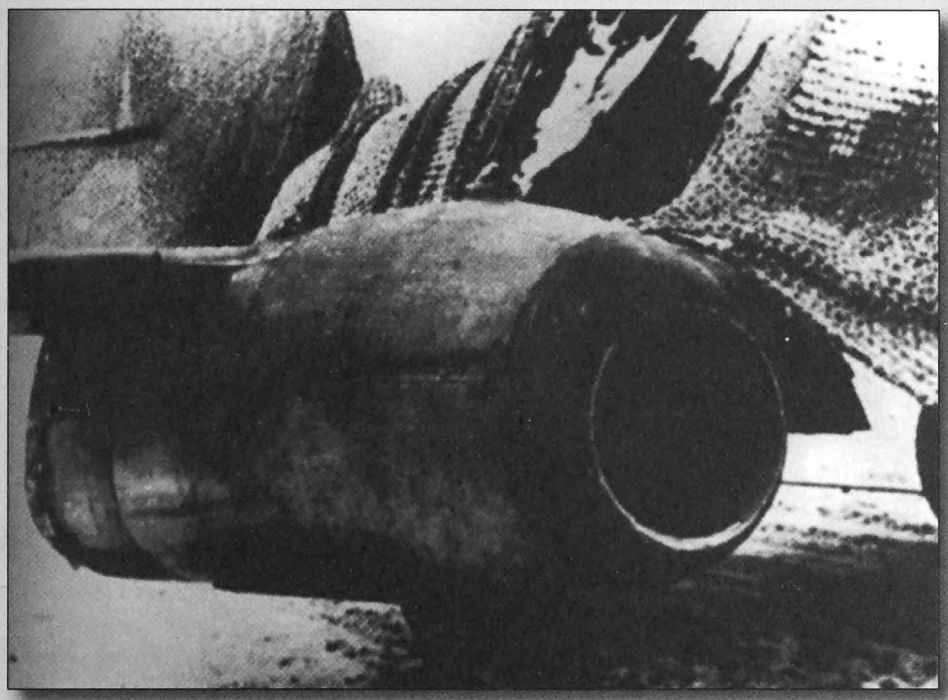
All-weather version of the A-1a. Equipped with FuG 125 Hermine VHF radio beacon signal receiver and K22 autopilot. FuG 120 Bernhardine ground to air communications set was installed later. Me 262 A-1a/U2 was intended to replace the A-1a on the production lines from the middle of 1945.

Me 262 A-1b

Because supplies of the Jumo 004 engine were inadequate, Messerschmitt once again tried to use the BMW 003 engine. Only four such aircraft were built.

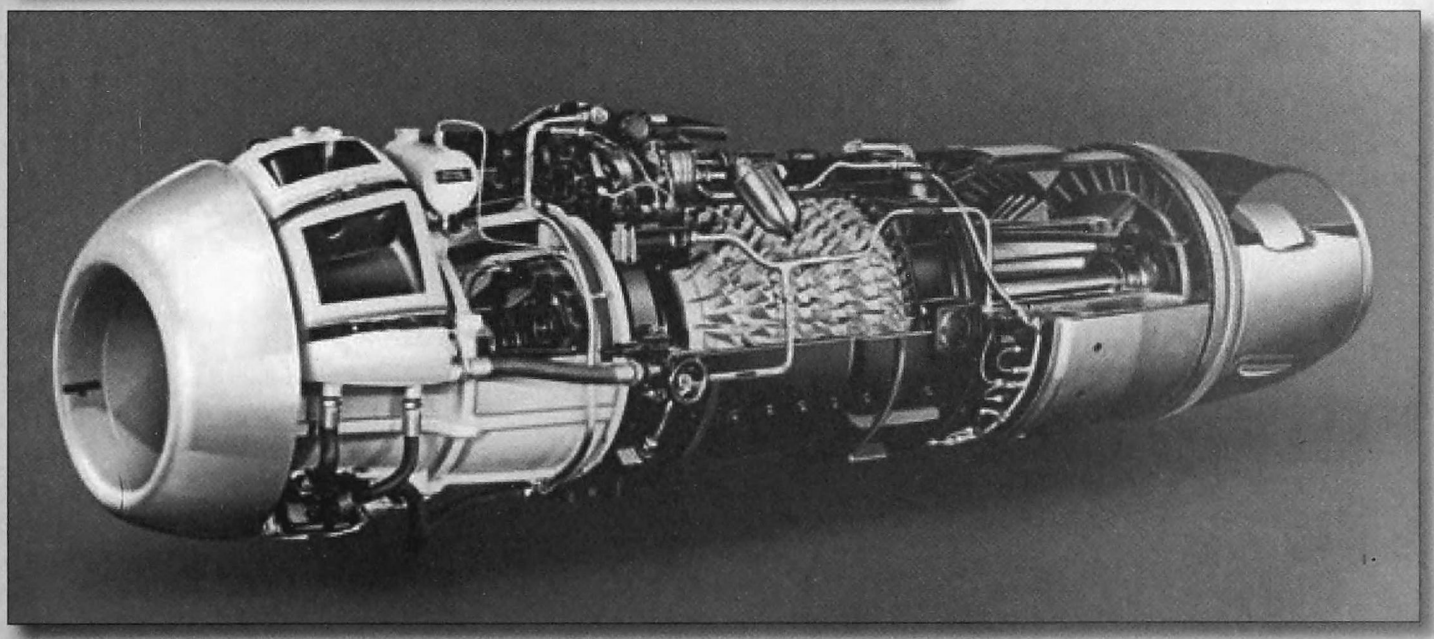
Me 262 A-1b side view. 1/72 scale.





Left: *The only known photo of BMW 003 engine mounted on Me 262 A. It was possibly W.Nr. 170078. (Stratus coll.)*

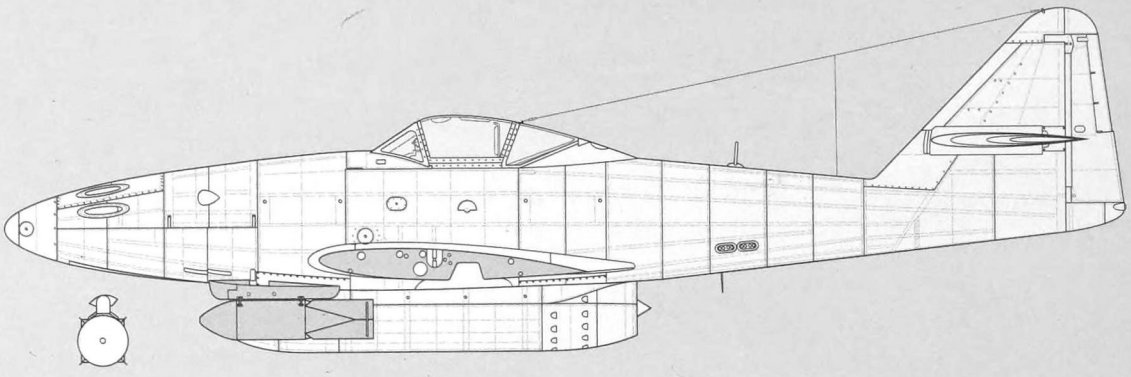
Below: *BMW 003 engine cut-away photo from Technical Manual, here in Hs 162 configuration.*



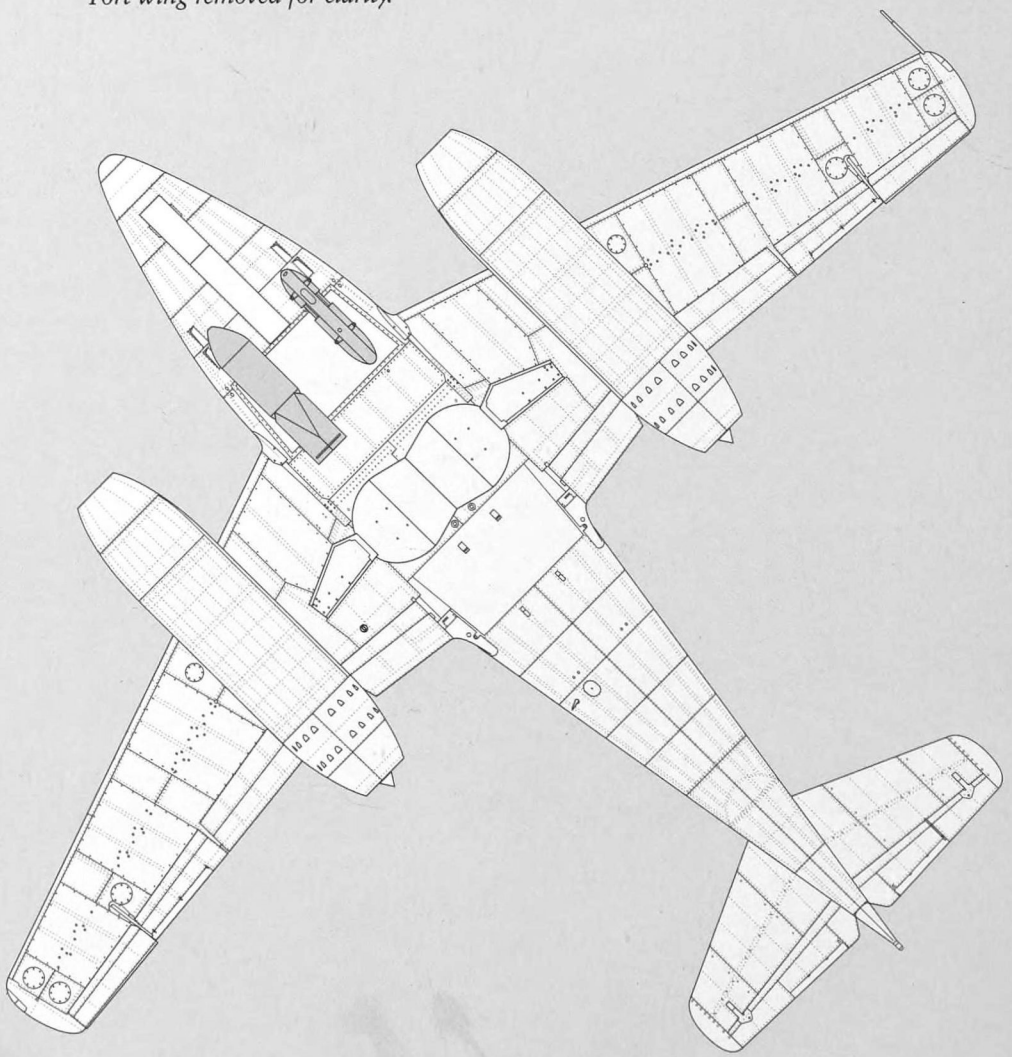
Me 262 A-1a/*Jabo*

Me 262A-1a/*Jabo* or Me 262A-1a/R6

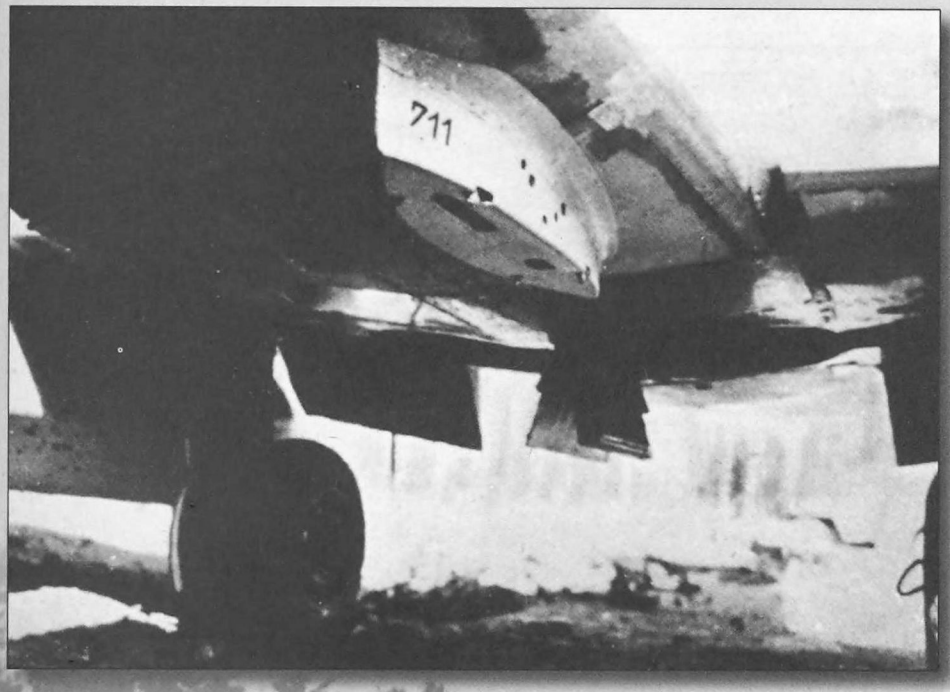
At Hitler's insistence, the Me 262 was adapted to carry bombs, and this version was produced alongside the fighter version. The *Jabo* differed from the fighter by the addition of bomb racks under the forward fuselage. Initially these were a pair of *Wikingerschiff* or ETC 503 racks, but these were later replaced by two ETC 504 racks. Either two 250kg bombs or a single 500kg bomb could be carried. The full gun armament of the fighter version was retained.



*Me 262 A-1a/*Jabo *scale plans. 1/72 scale. Port wing removed for clarity.*



Me 262 A-1a converted to Jabo *version. W.Nr. 110813 with upper pair of the MK 108 cannons removed and fitted with ETC 503 bomb racks. (Stratus coll.)*

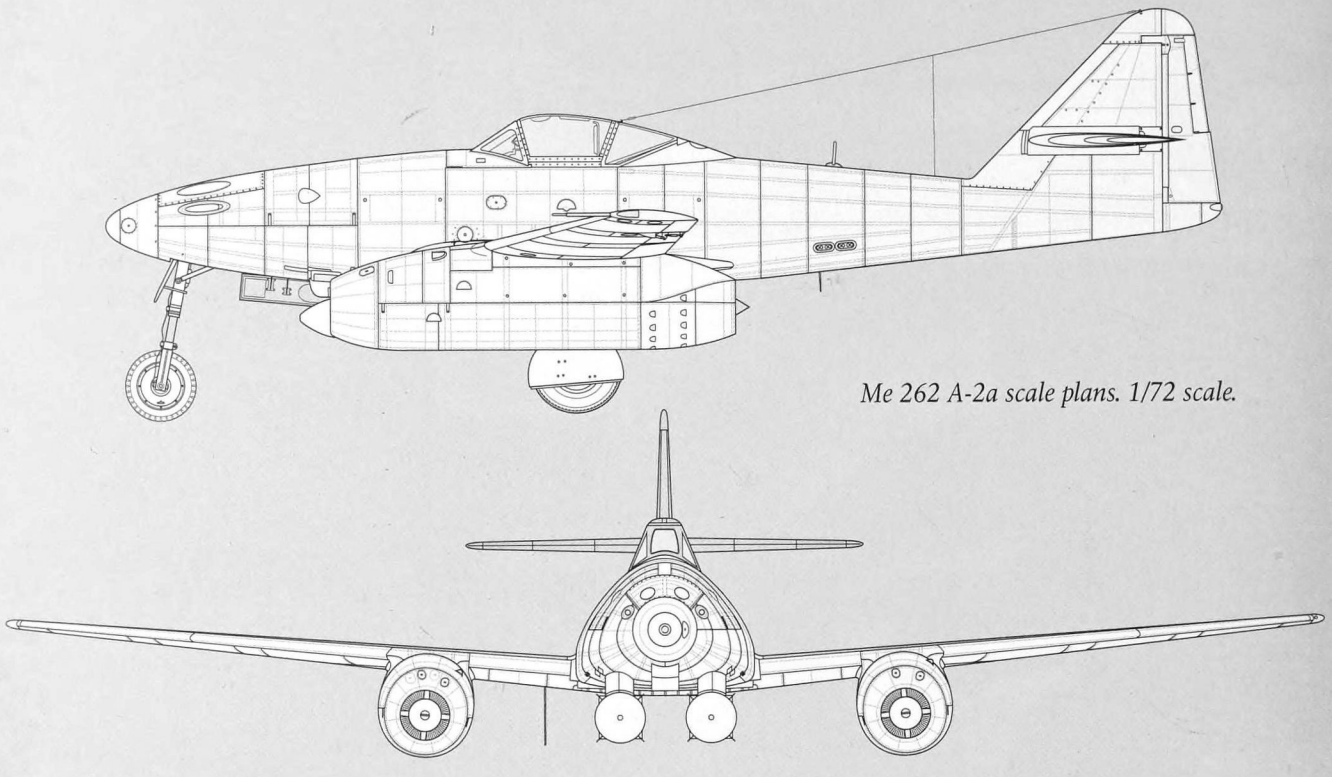


Close up photo of the Wikingerschiff *bomb racks. (Stratus coll.)*

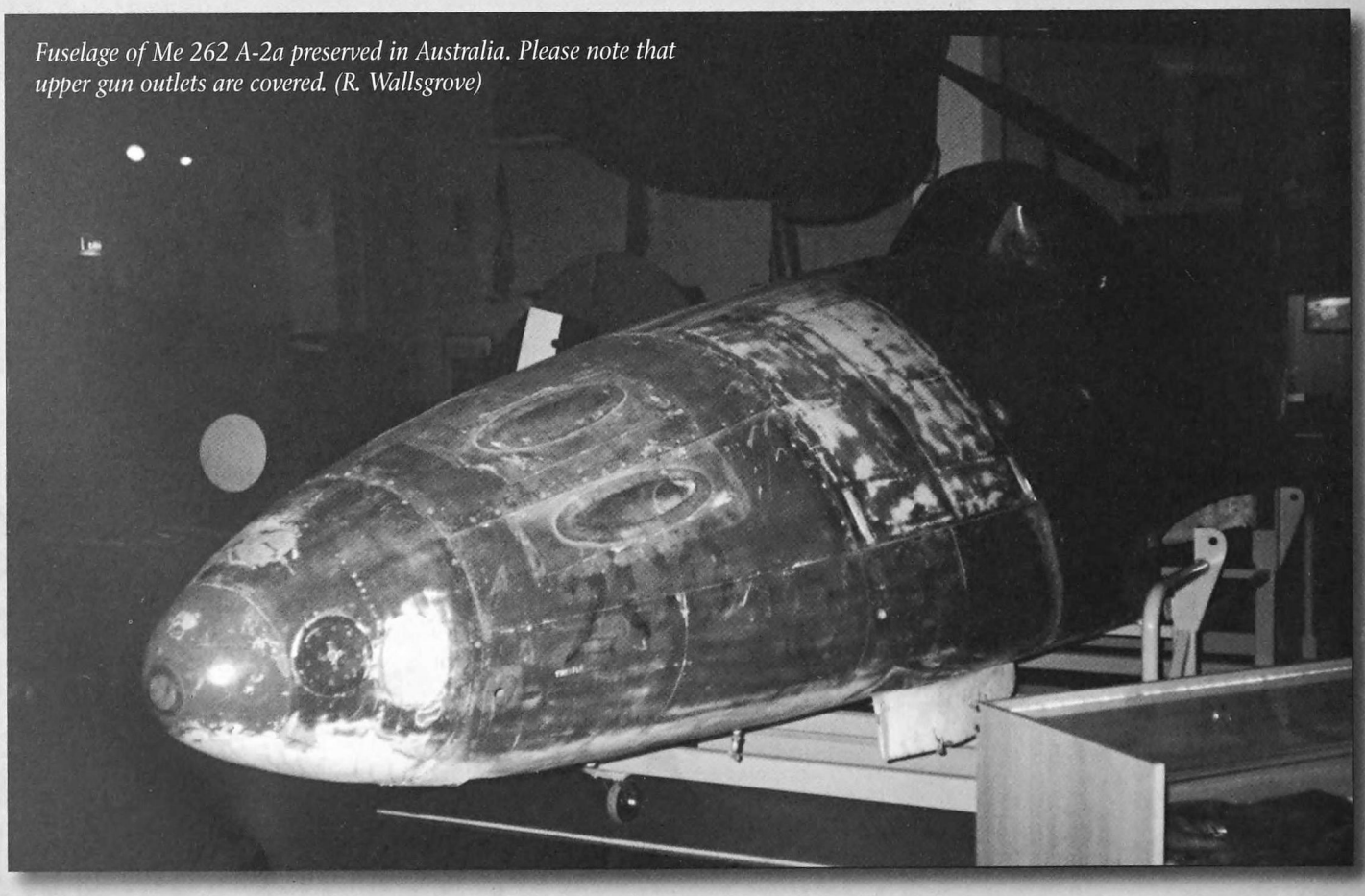
Me 262 A-2a with ETC 504 bomb racks. Aircraft of 1./KG51. Please note the typical camouflage for Jabo *version. (P. Buchar coll.)*

Me 262 A-2a "*Sturmvogel*"

This model was originally produced as a bomber. As with the previous *Jabo* model it was equipped with two bomb racks, initially Wikingerschiff or ETC 503 but later ETC 504. The armament was reduced to two MK108 cannon (the lower pair), with the upper pair of blast outlets blanked off. Some aircraft, however, retained all four guns. An additional fuel tank was installed behind the cockpit, and the structure of the nose section was strengthened around the bomb rack attachments. These modifications increased the all-up weight by 325kg.



Me 262 A-2a scale plans. 1/72 scale.



Fuselage of Me 262 A-2a preserved in Australia. Please note that upper gun outlets are covered. (R. Wallsgrove)

Me 262 A-2a/U1

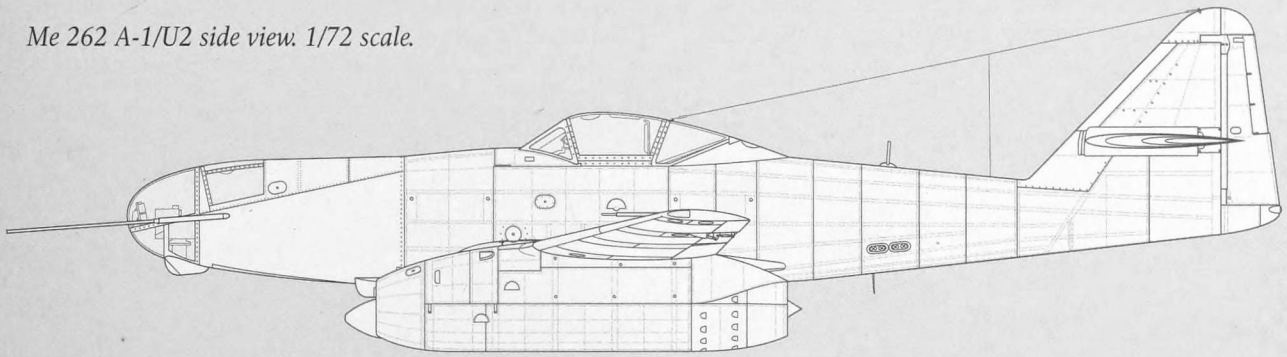
A bomber version equipped with the TSA-2A aiming system, allowing precise bomb aiming both in level flight and in a dive. By the end of 1944 three aircraft were tested with this equipment, the TSA-2A being a combination of auto-pilot and flight programmer. This allowed precision approaches to the target to be programmed. Extensive testing suggested around a 4-fold increase in the precision of bomb delivery. Three aircraft W.Nr. 130164, 130188, 170070 were tested at Rechlin.

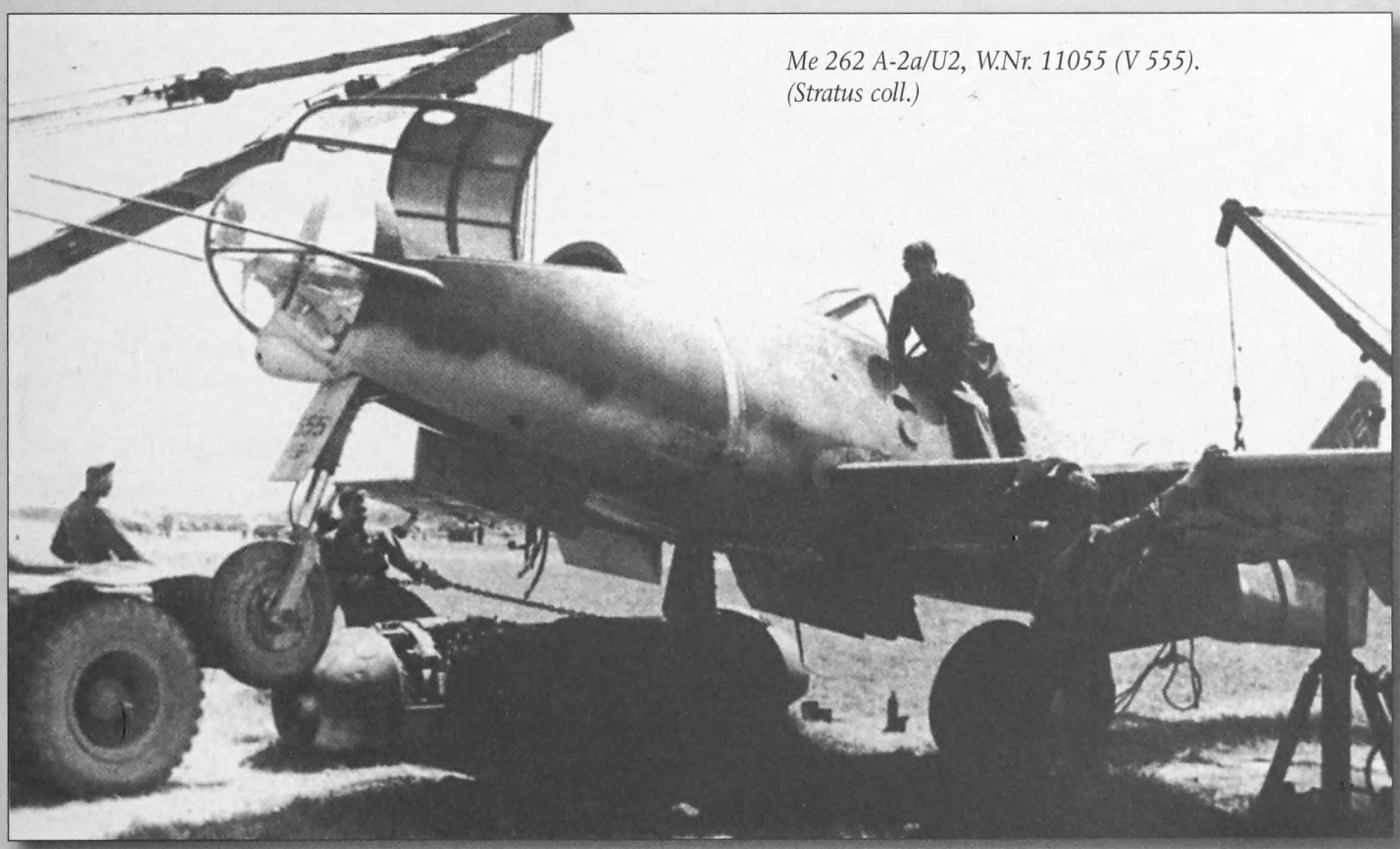
Me 262 A-2a/U2

This extensively modified version had a new nose section with provision for a second crew member and a fully glazed nose. The second crewman operated as bomb-aimer, using a regular Lofte 7H bomb sight, and this considerably improved the accuracy of bombing. Numerous tests demonstrated this improvement, even with high altitude bomb release. Two prototypes were built, and testing continued from October 1944 until the end of the war. This model was also used as a test bed for the Siemens K22 auto-pilot.

Other similar versions were planned, the Me 262 A-2a/R2 bomber and the Me 262 A-3 attack aircraft, both with increased armour protection.

Me 262 A-1/U2 side view. 1/72 scale.

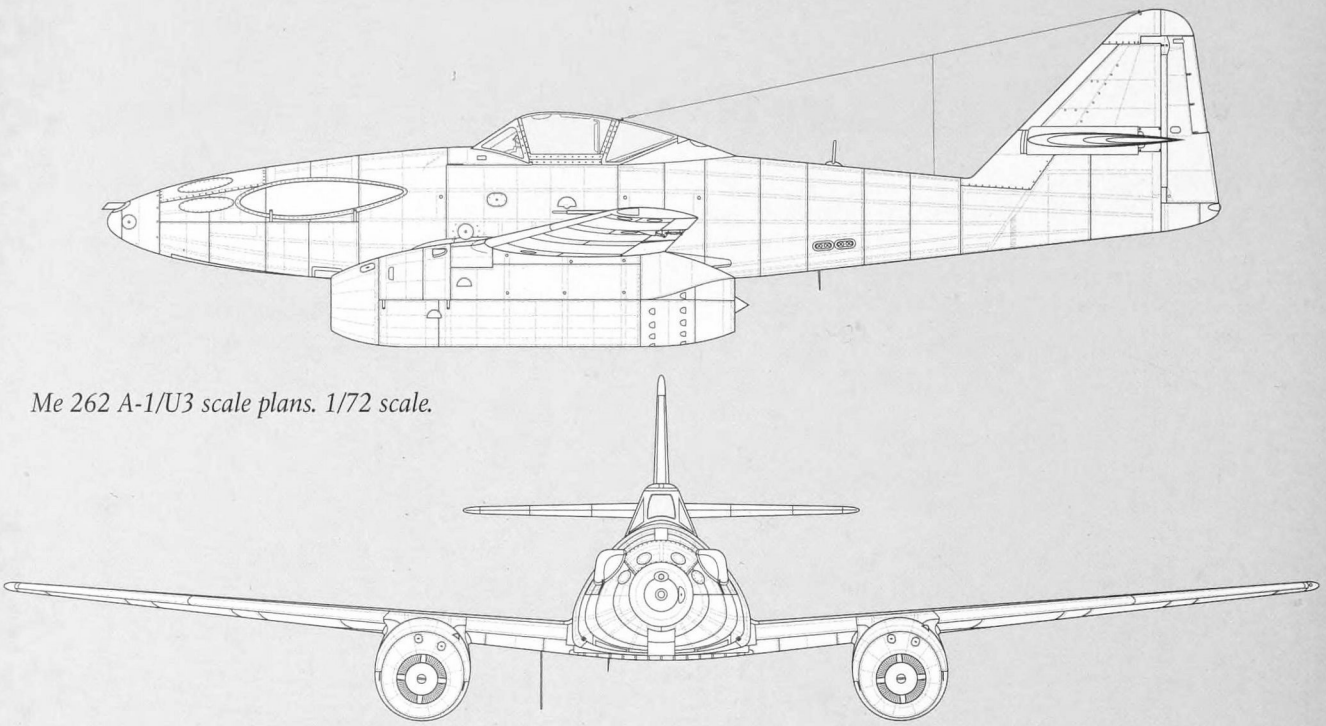




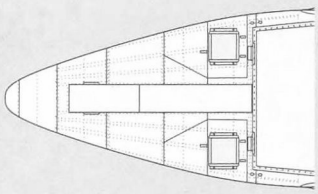
Me 262 A-2a/U2, W.Nr. 11055 (V 555). (Stratus coll.)

Me 262 A-1/U3

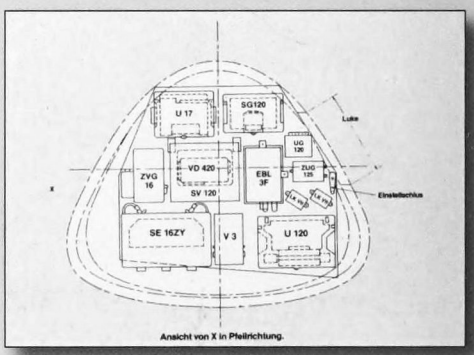
The high speed of the Schwalbe was seen to make it a promising reconnaissance aircraft, and in the summer of 1944 several Me 262 A-1as were adapted to this role. The armament in the nose was replaced by two special cameras in the cannon bay, either two Robot Rb50/30 or one Rb20/30 and one Rb75/30. It is not thought that any armament was fitted – photos show an outlet in the nose, but this may well have been an air duct for cooling the cameras.



Me 262 A-1/U3 scale plans. 1/72 scale.



***Right:** Me 262 A-1/U3 equipment. Drawing from Me 262 Handbuch.*

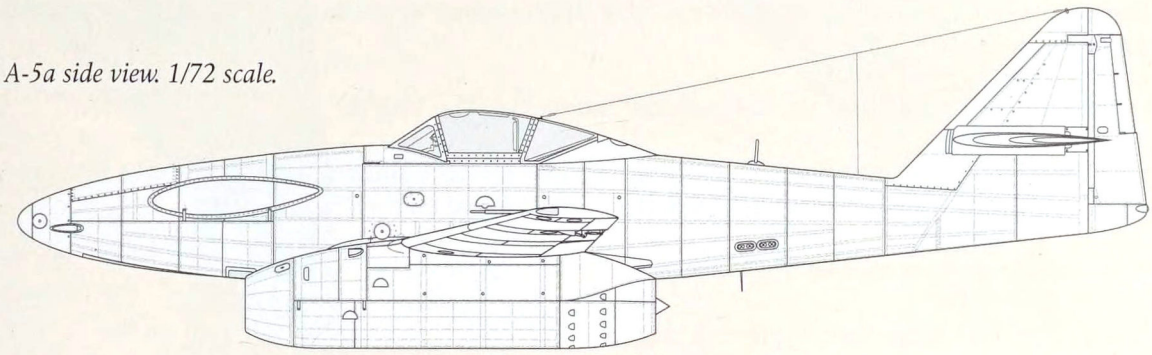


Me 262 A-1a/U3 of 2./NAGr 6, with American markings, FE-4012. (US National Archives)

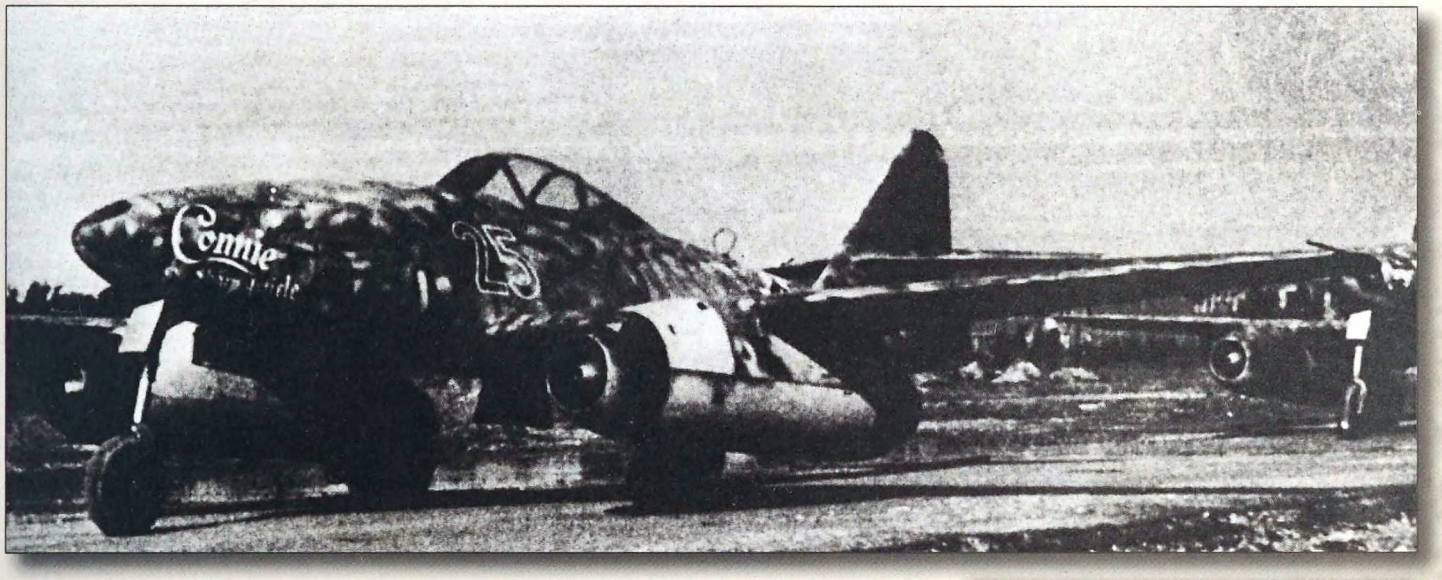
Me 262 A-5a

Another reconnaissance version, essentially the same as the A-1a/U3, but with attachments for detachable underwing fuel tanks of 300 l each. In addition, a special window was installed in the cockpit floor, to allow better observation of the terrain being photographed. Two MK 108 cannon were fitted in the lower part of the fuselage. It is not known whether this aircraft actually flew before the end of the war.

Me 262 A-5a side view. 1/72 scale.



***Below:** Me 262 A-1a/U3 of 2./NAGr 6, "25" captured by Americans at Lechfeld. Aircraft with American name, "Connie My Sharp Article". (US National Archives.)*



Avia S-92

S-92 was a Czechoslovakian built version of Me 262 A-1a which was different in having a hydraulic pump connected to each engine.

More about Czechoslovak Me 262 you can read in another MMP book titled: *Mezek & Turbina: Messerschmitts in Czechoslovakia*, ISBN: 978-8363678081 by Bohumir Kudlička.

More Me 262 versions (projects) are described in another MMP book titled:
German Air Projects 1935–45 Fighters.
Including following variants:
Me 262A HG
Me 262A-3a Project Panzerflugzeug
Me 262C Heimatschützer

Additional Armament

In order to increase the firepower of the Me 262, a variety of rocket projectiles were tested. Initially tubular launchers for the unguided W.Gr21 cal. 210 projectiles were fitted, and several aircraft of JG7 were so equipped.

Me 262 W.Nr. 111994 was used as a test bed for the Borsig R110BS projectiles.

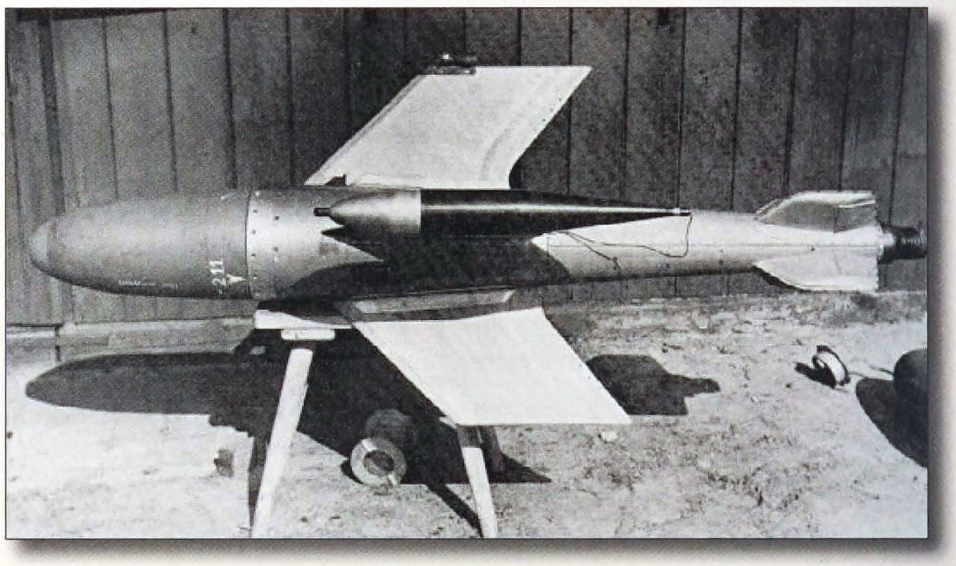
Best results were obtained with the R4M rockets built by DWM. Approximately 60 Me 262s were equipped to carry this weapon, either 12 or 24 under each wing.

Guided rocket projectiles were also tested, the X-4 *Ruhrstahl* and the Henschel Hs298.

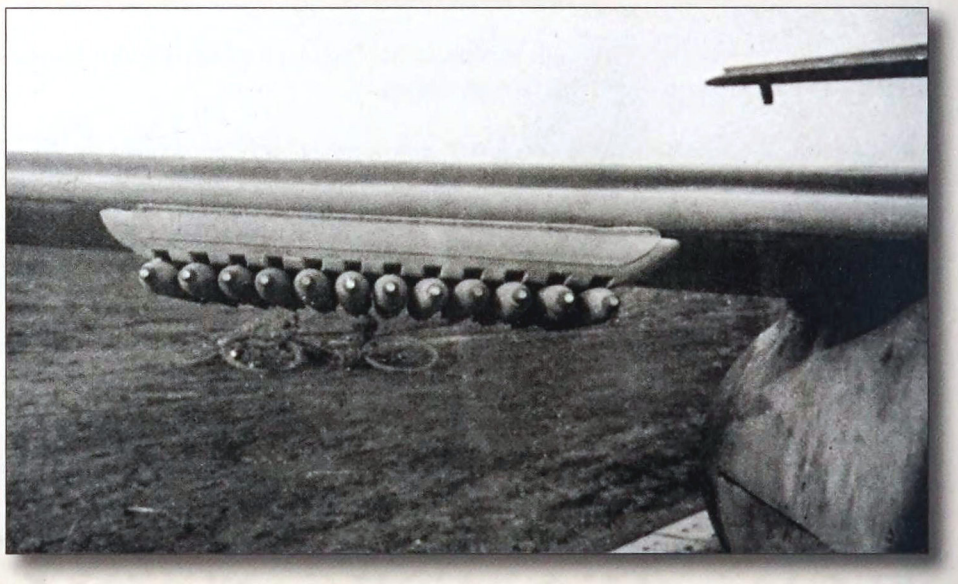
Among the more unconventional weapons tested on the Me 262 were mortar launchers, the RZ.73 (Hs217 *Föhn*) also know as the SG500 *Jägerfaust*. Special anti-aircraft bombs were also tested, to be dropped on bomber formations.

Official *Rutzsatze* designations as used on Me 262 A

R1 – under fuselage drop tank carrier for 500 litre fuel tank.
R2 – RATO installation of 2 x Ri 502
R3 – BMW 003R installation
R4 – Radar installation of FuG 350 Zc *Naxos*
R5 – Standard weapon installation (4 x MK 108s)
R6 – *Jabo* (fighter-bomber) equipment)
R7 – R4M air-to-air rockets
R8 – R110BS air-to-air rockets
R9 – Ru 344 (X4) air launch missile

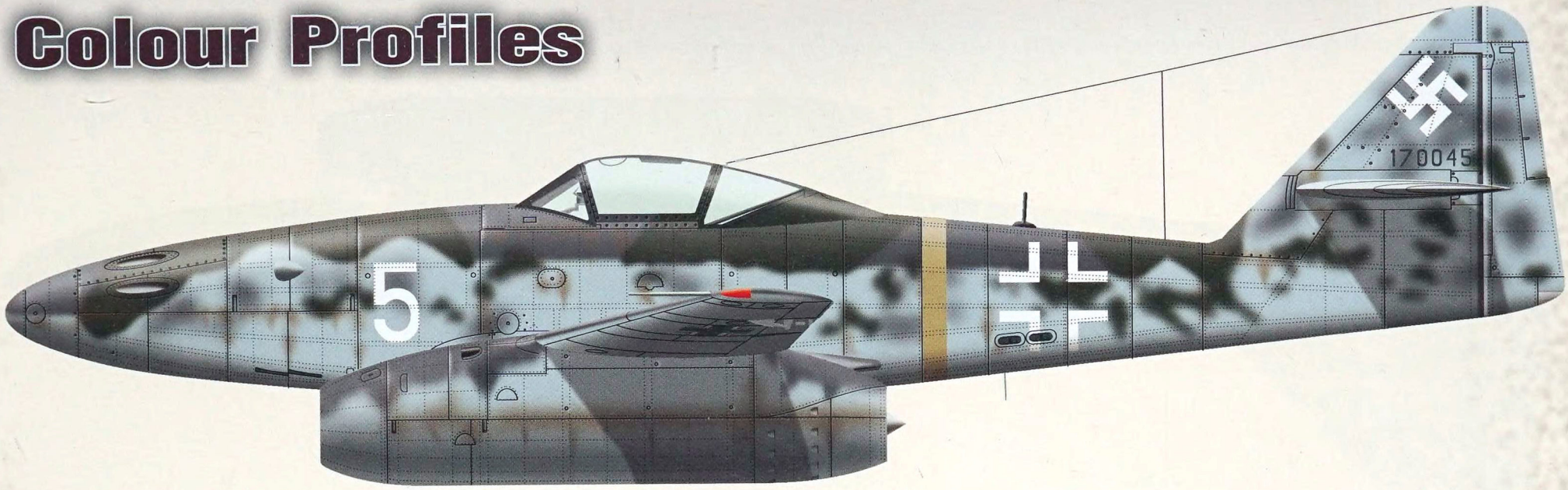


Ru 344 (X4) air launch missile.
(Stratus coll.)

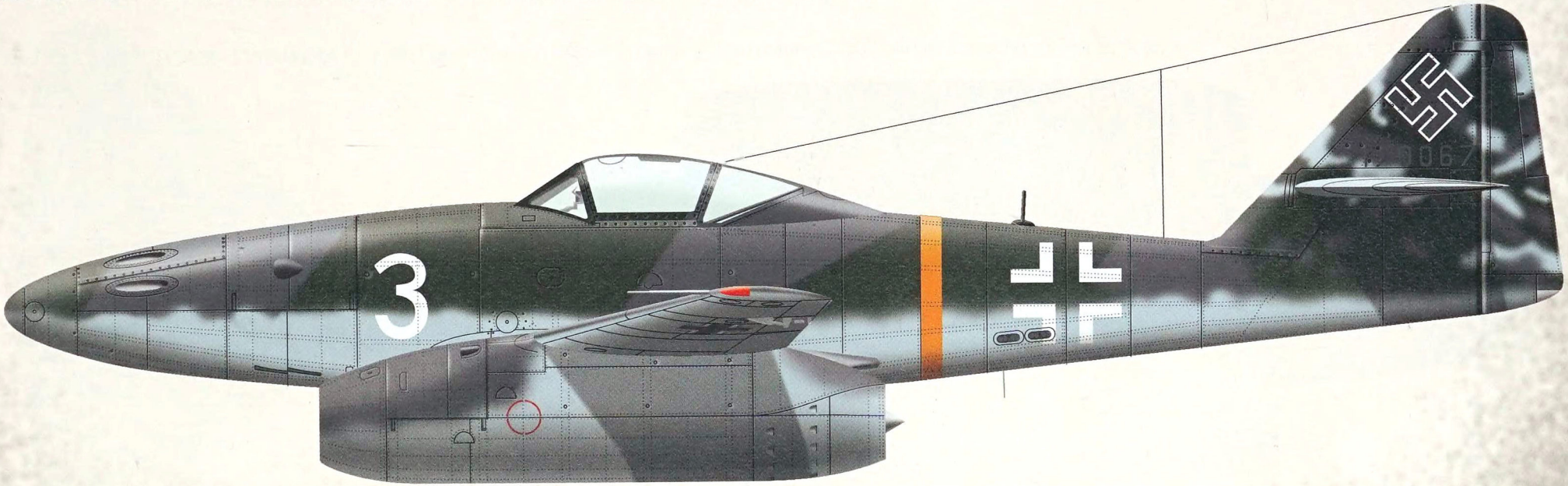


Twelve R4M rockets on their rack under the wing of an Me 262 A-1a.
(Stratus coll.)

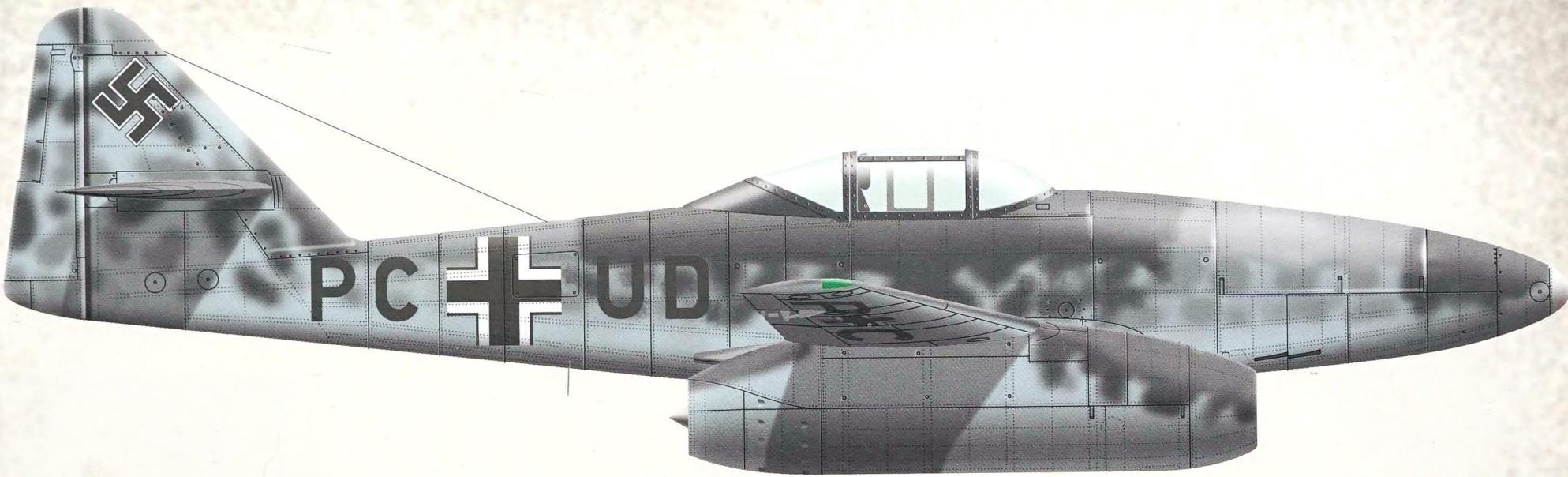
Colour Profiles



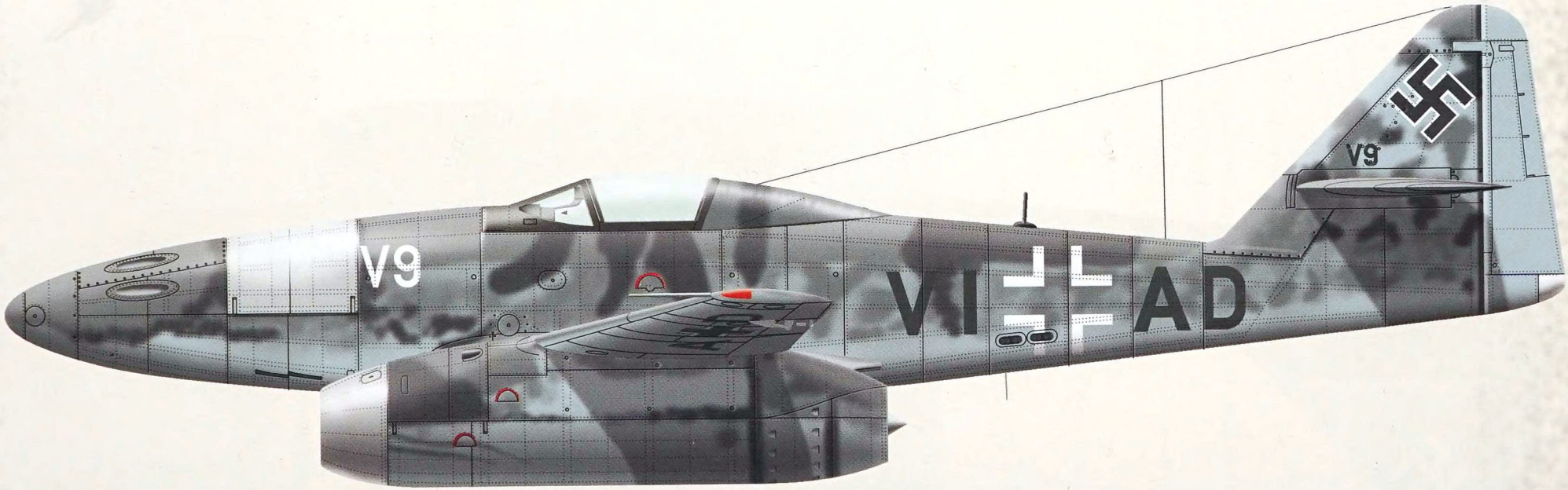
Me 262 A-1a, "White 5", W.Nr. 170045 of Kommando Novotny, Aircraft in RLM 74/75/76 camouflage.



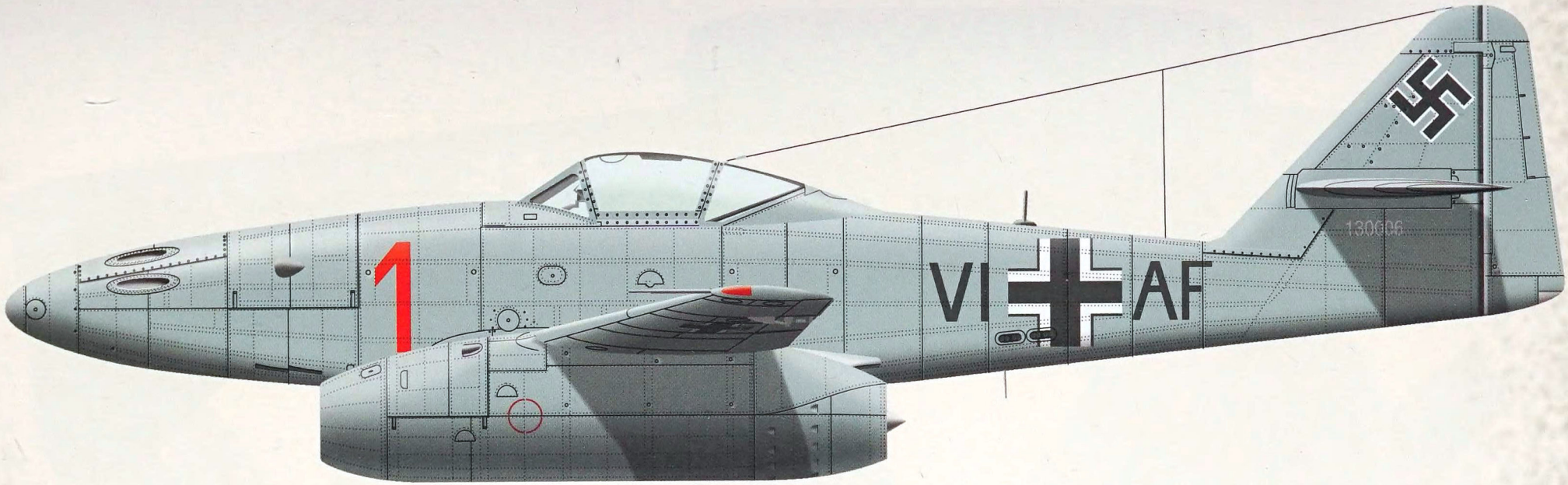
Me 262 A-1a, "White 3", W.Nr. 170067 of Erprobungskommando *262, summer 1944, Lechfeld. Aircraft in RLM 74/75/76 camouflage.*



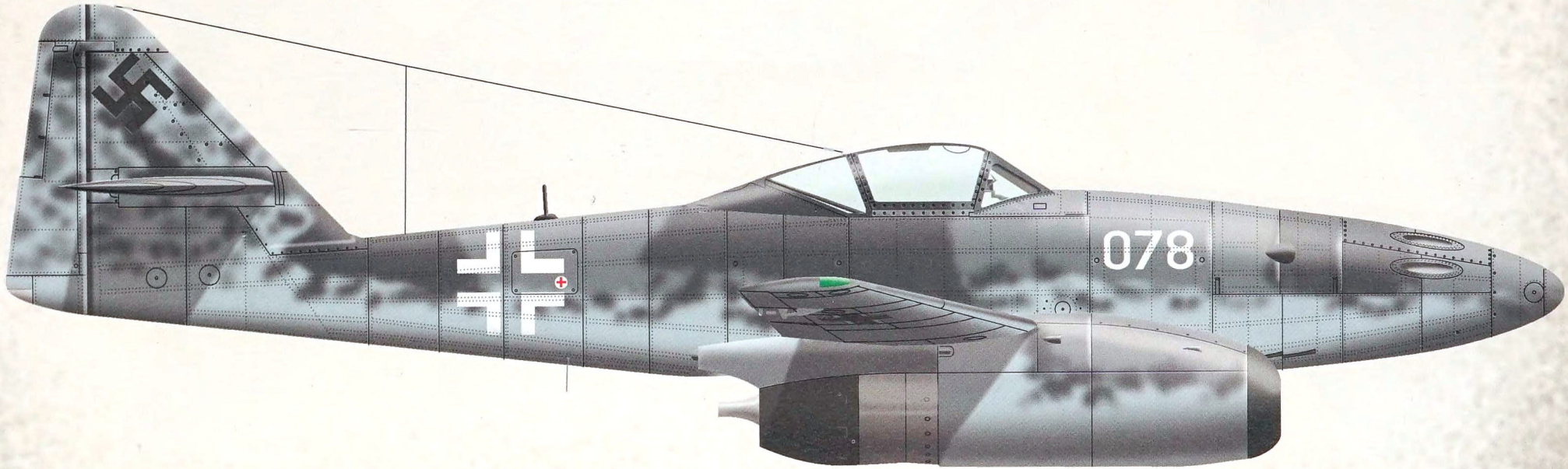
Me 262 V4, PC+UD, W.Nr. 2620000004 with early Jumo 004 A-0 engines. RLM 74/75/76 camouflage with mottling of RLM 71 and RLM 02.



Me 262 V9, VI+AD, W.Nr. 130004 with Jumo 004 B engines. It was the first prototype with the new "bubble" style canopy. Shown here with the racing style canopy after modyfing to HG I prototype. RLM 74/75/76 camouflage with mottling of RLM 71 and RLM 02



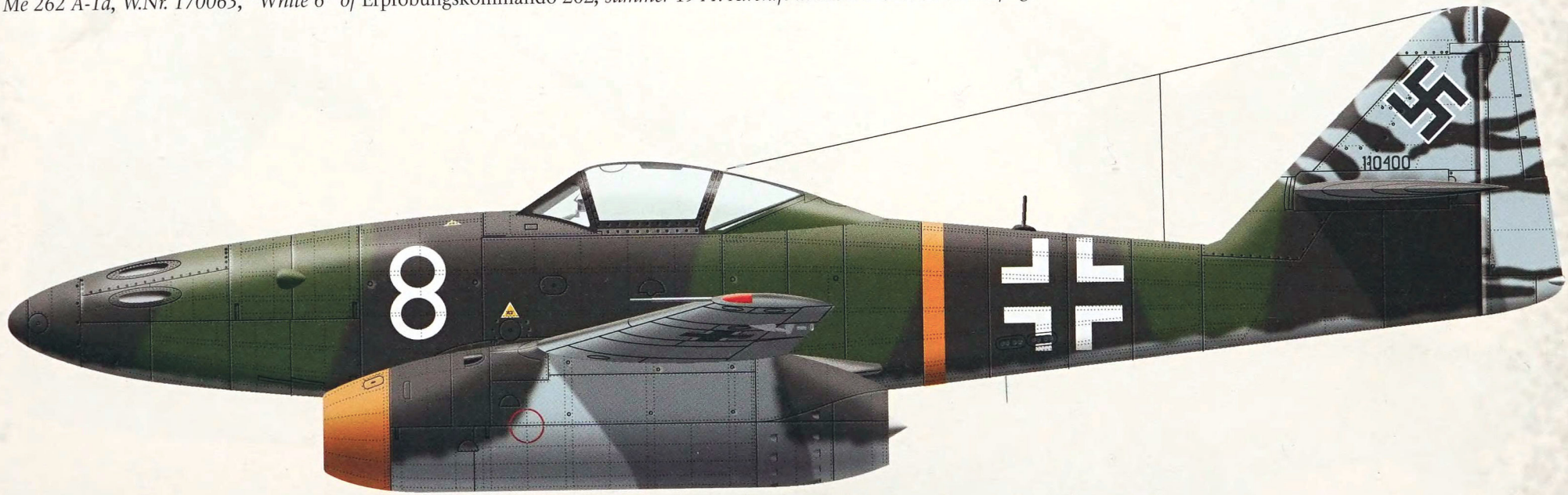
Me 262 S1, V+AF, W.Nr. 130006 with Jumo 004 B-1 engines. The first series production aircraft, that first flew on 19 April 1944. Aircraft RLM 76 overall.



Me 262 A-1b, V 078, W.Nr. 170078, aircraft equipped with two BMW 003 A-1 engines. Standard RLM 74/75/76 camouflage.

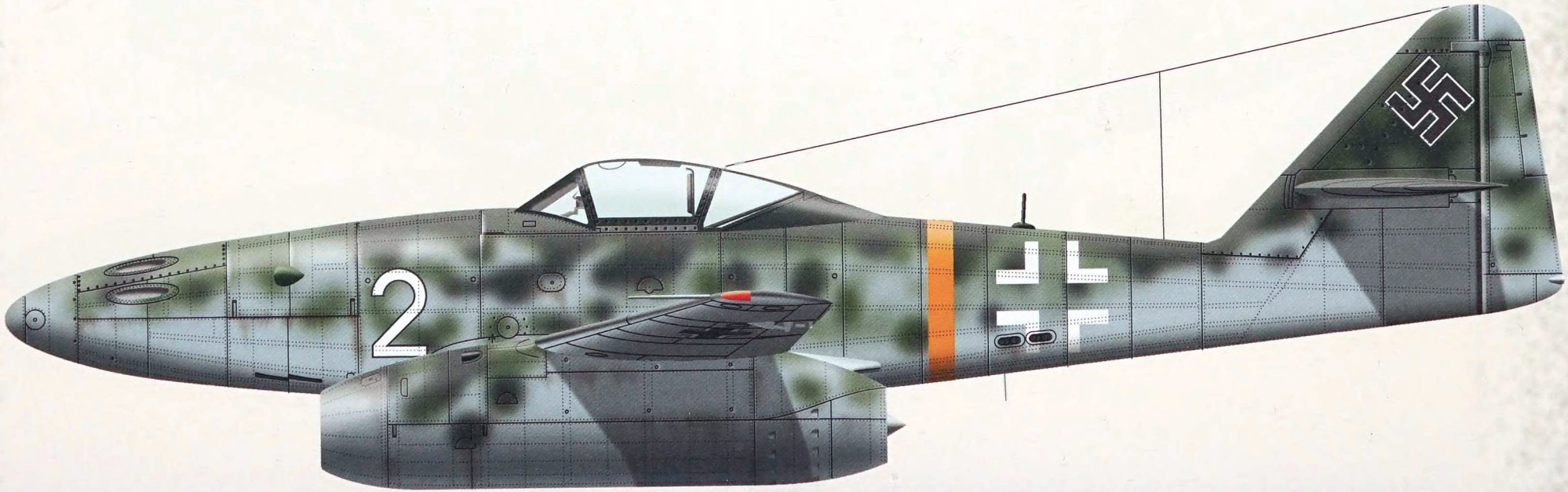
This and opposite page: Me 262 A-1a, "White 1", of Erprobungskommando 262, *Lechfeld, June–July 1944. Typical RLM 74/75/76 camouflage.*

Me 262 A-1a, W.Nr. 170063, "White 6" of Erprobungskommando 262, *summer 1944. Aircraft in RLM 74/75/76 camouflage.*

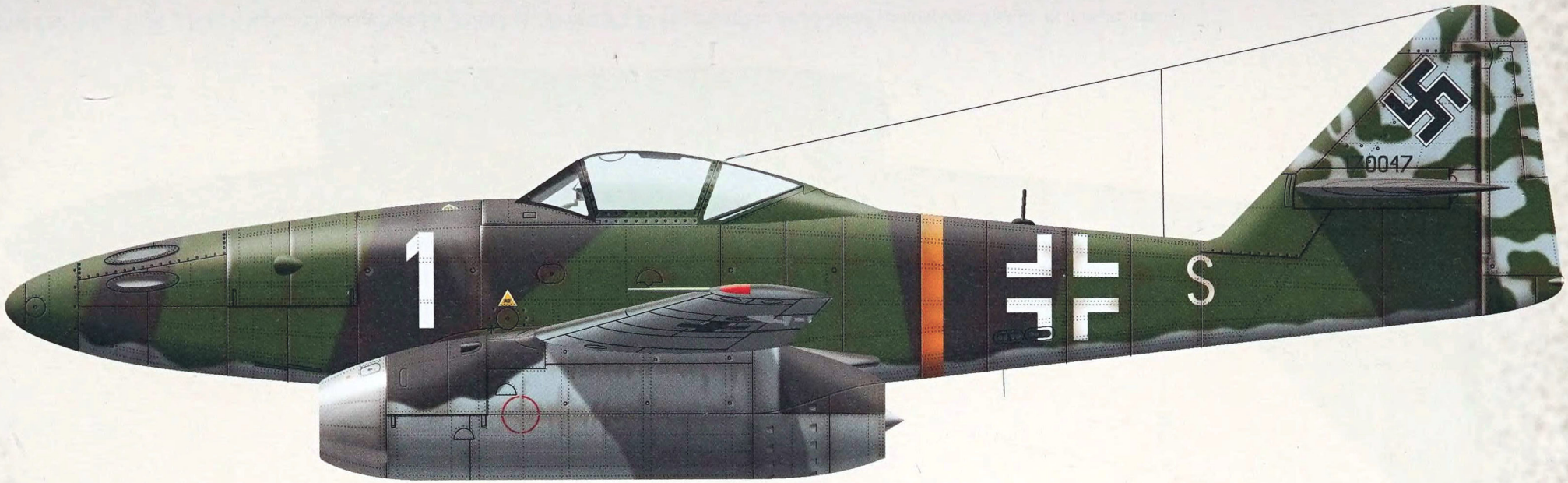


Above and opposite page: *Me 262 A-1a, W.Nr. 140400, "White 8". Kommando Novotny, Achmer, November 1944. Personal aircraft of* Major *Walter Novotny. Aircraft in typical RLM 82/81/76 camouflage.*

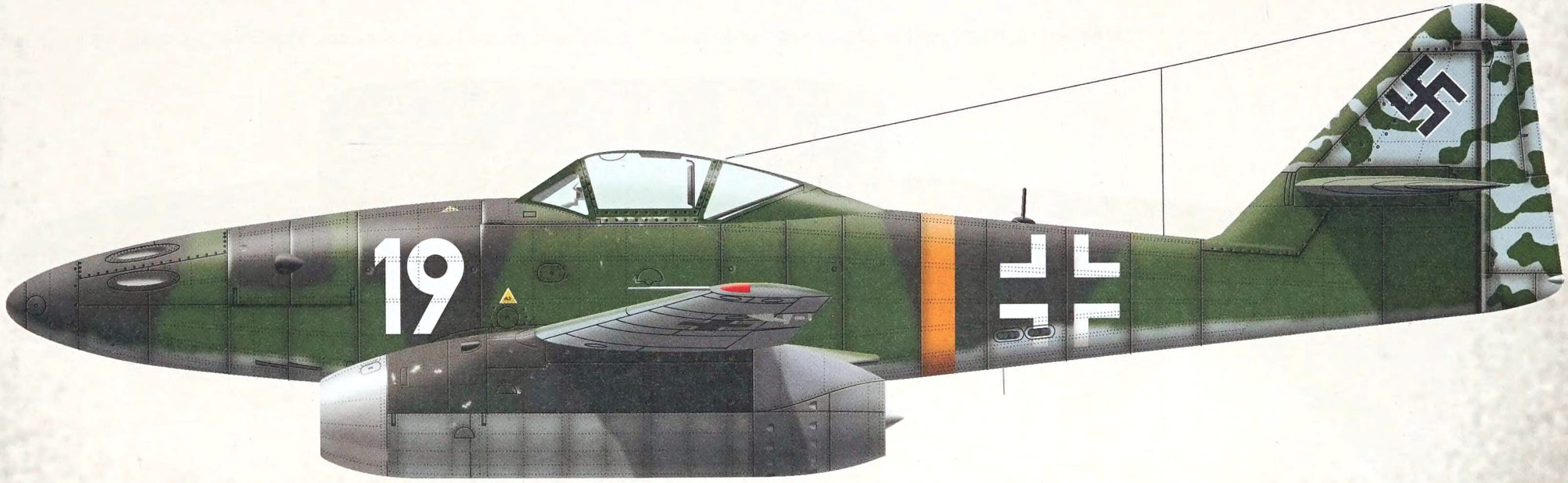
Me 262 A-1a, "White 1" of Kommando *Novotny, autumn 1944. Personal aircraft of* Staffelkapitan *Franz Schal. Aircraft in RLM 82/81/76 camouflage.*



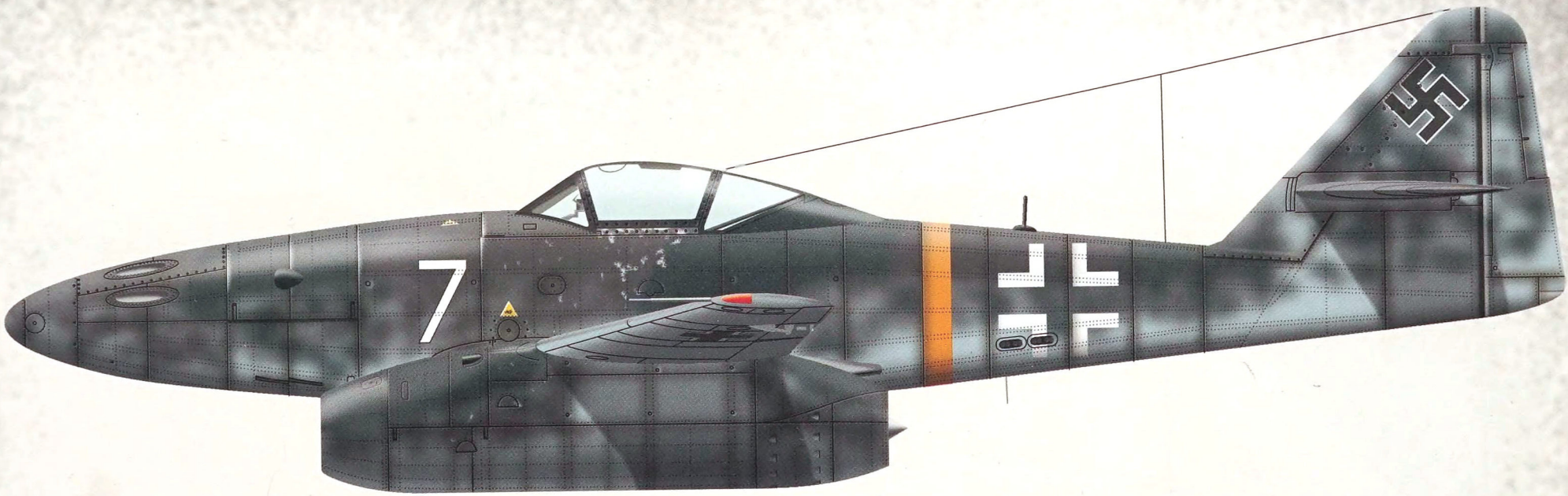
Me 262 A-1a, "White 2" of Kommando *Novotny at Lechfeld, November 1944. Personal aircraft of* Major *Erich Hohagen. Aircraft in RLM 82/81/76 camouflage. Patches in RLM 82/81.*



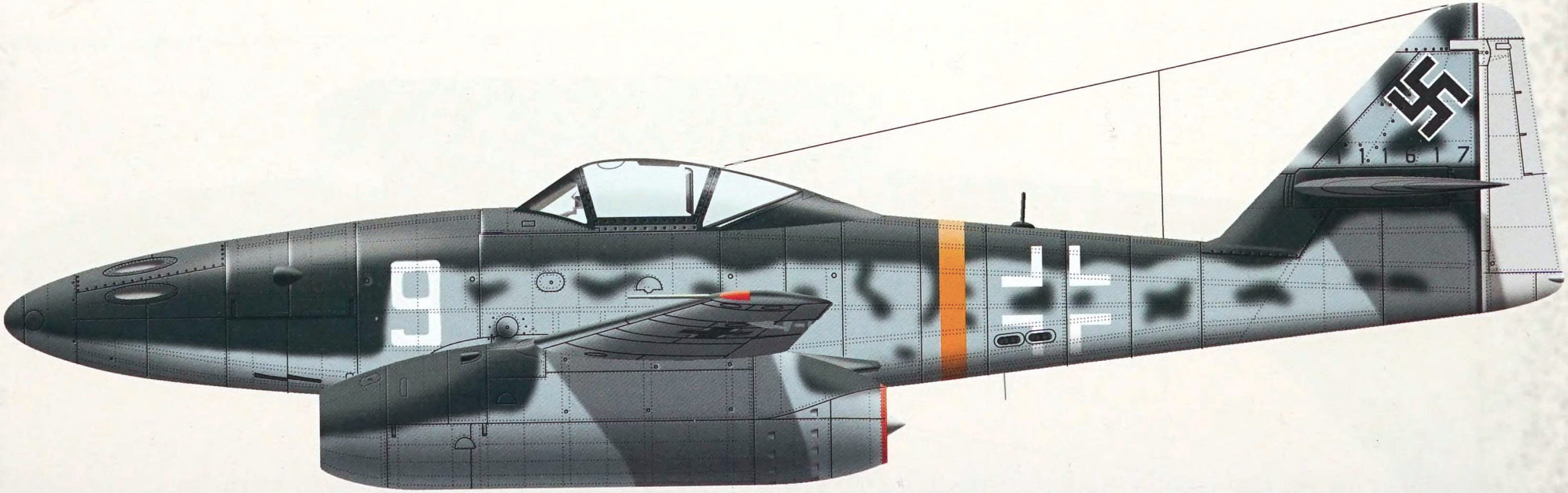
Me 262 A-1a, "White 1" of Kommando *Novotny at Lecheld, autumn 1944. Aircraft in RLM 82/81/76 camouflage. White letter "S" means that it is training* "Schule" *aircraft.*



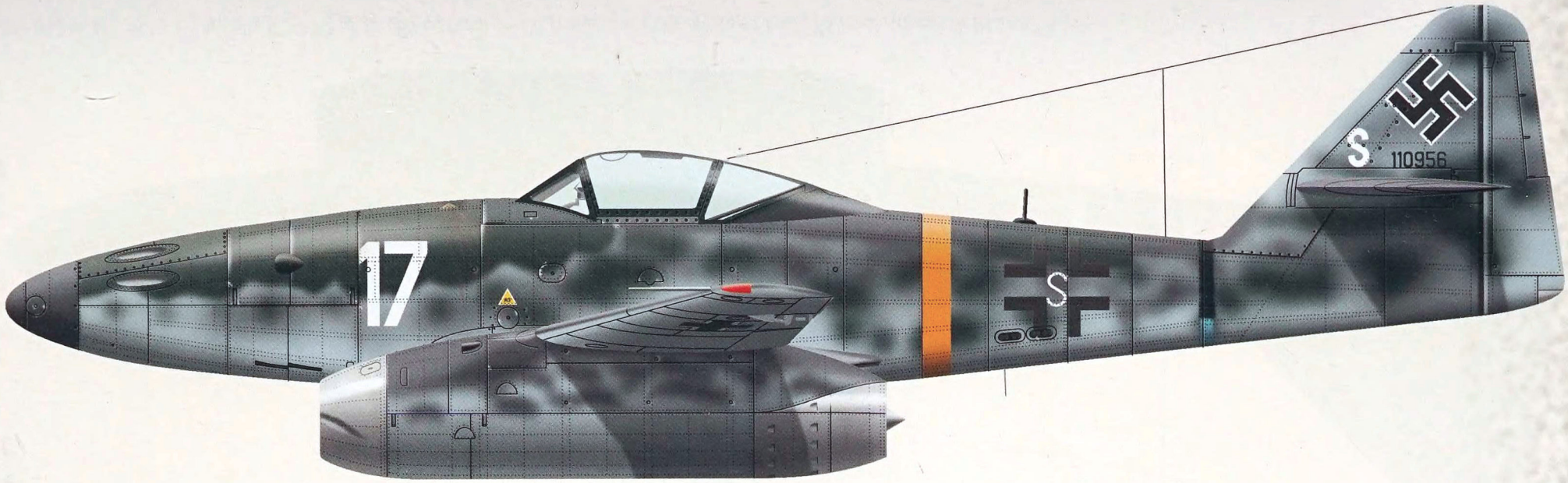
Me 262 A-1a, "White 19" of Kommando *Novotny at Achmer, summer 1944. Aircraft in RLM 82/81/76 camouflage. Engine inlets are not painted (natural metal), rear part of the engine nacelles are grey.*



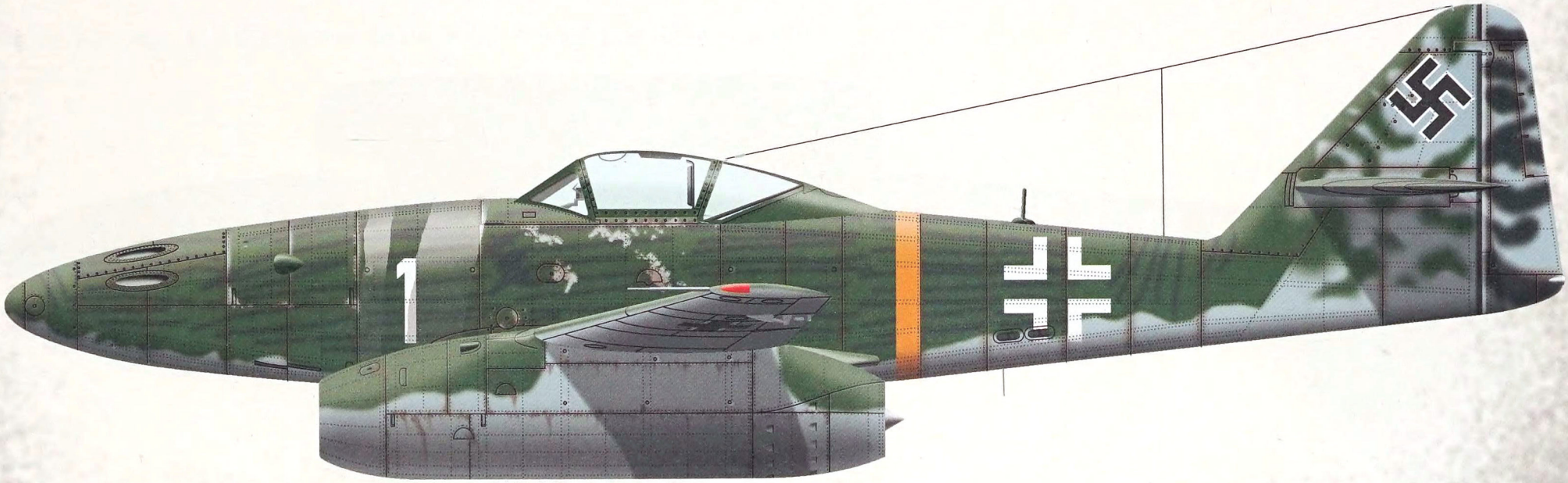
Me 262 A-1a, "White 7" at Lechfeld, November 1944. Personal aircraft of Obf. *Hermann Büchner. Aircraft in RLM 82/81/76 camouflage.*



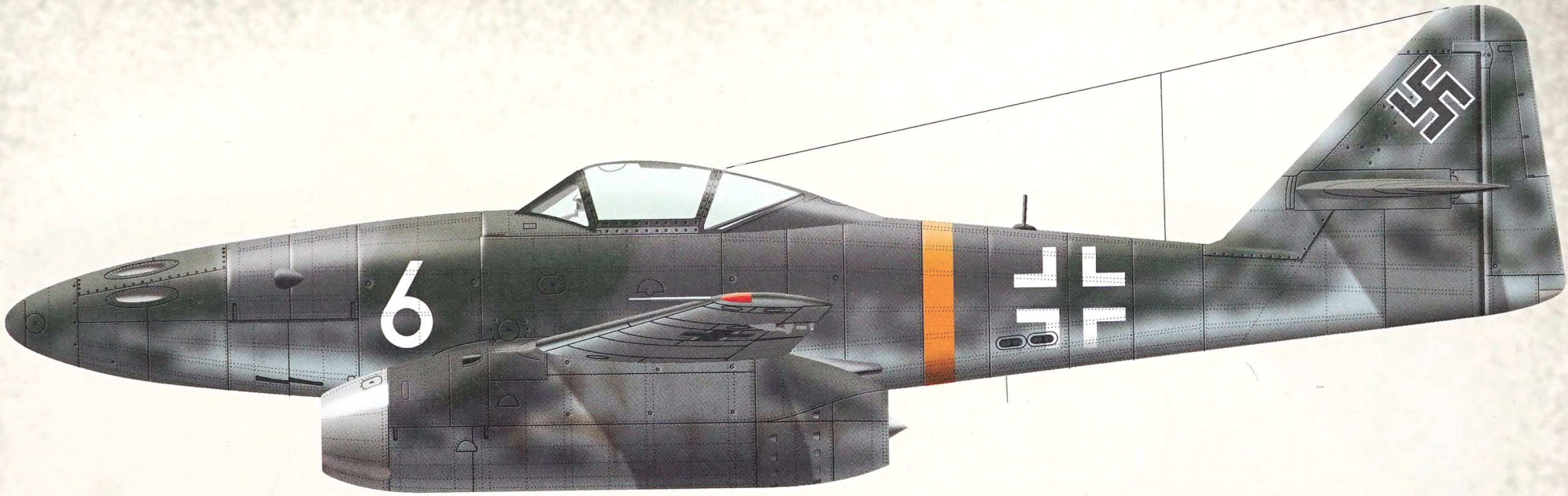
Me 262 A-1a, W.Nr. 111617 Erganzhjagdgeschwader *2 (EJG 2), "White 9", 1944. Aircraft in RLM 76/83 camouflage. Rudder in natural metal.*



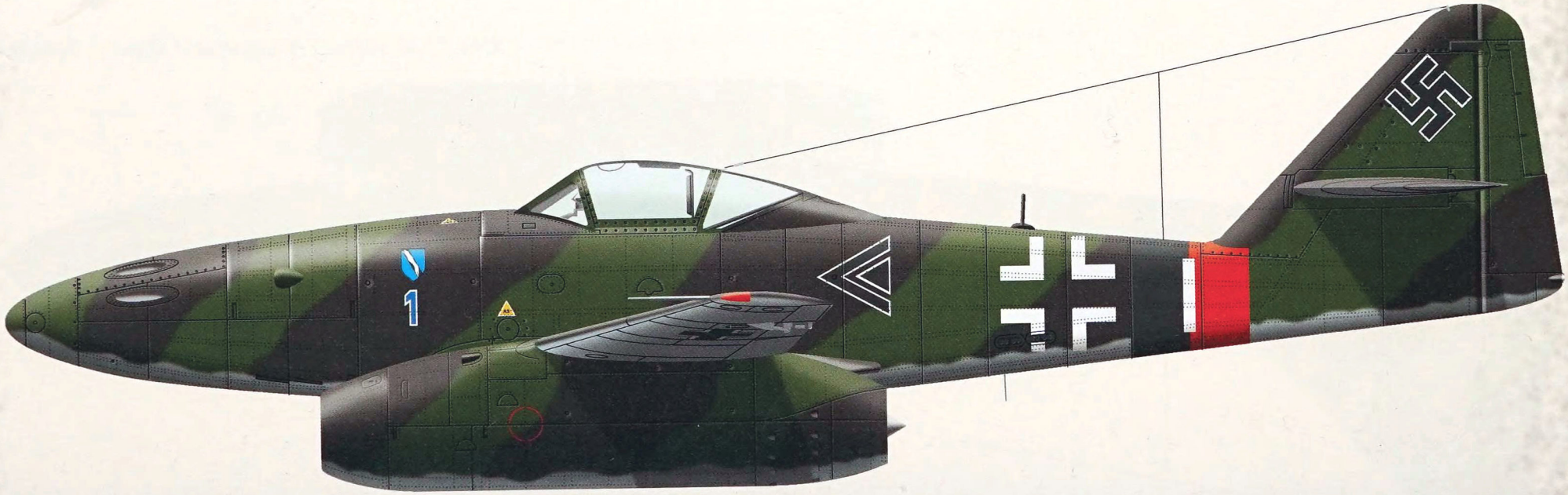
Me 262 A-1a, W.Nr. 110956 "White 17" of III./EJG 2, 1945. Aircraft in RLM 74/75/76 camouflage. Nose of the aircraft is dark grey.



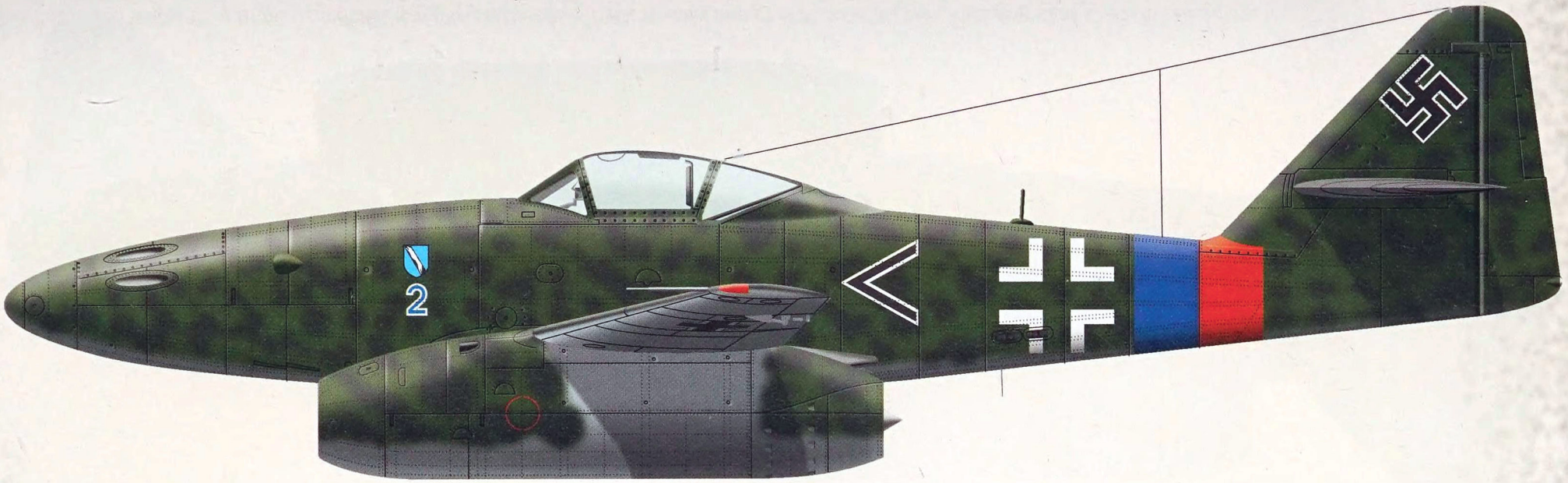
Me 262 A-1a, "White 1" of EJG 2, Austria, May 1945. Aircraft in RLM 82/76 camouflage with sprayed over patches in RLM 81. Fin is painted in JG 7 style, but aircraft was used in EJG 2.



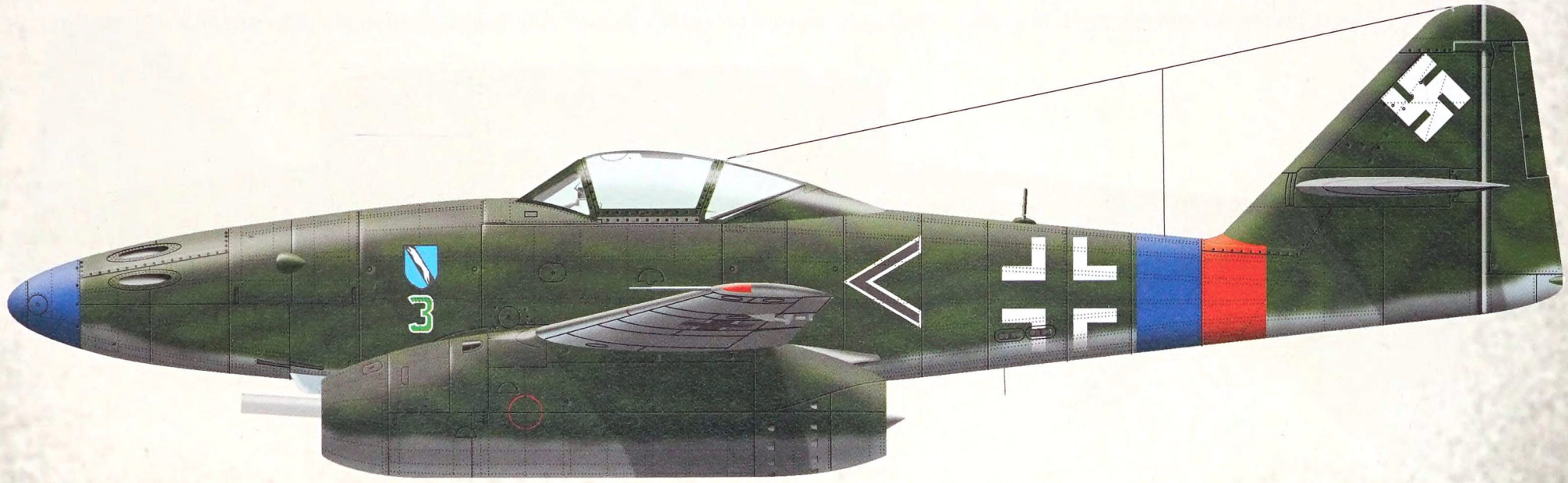
Me 262 A-1a, "White 6" of EJG 2, October 1944 at Lechfeld. Aircraft in RLM 74/75/76 camouflage.



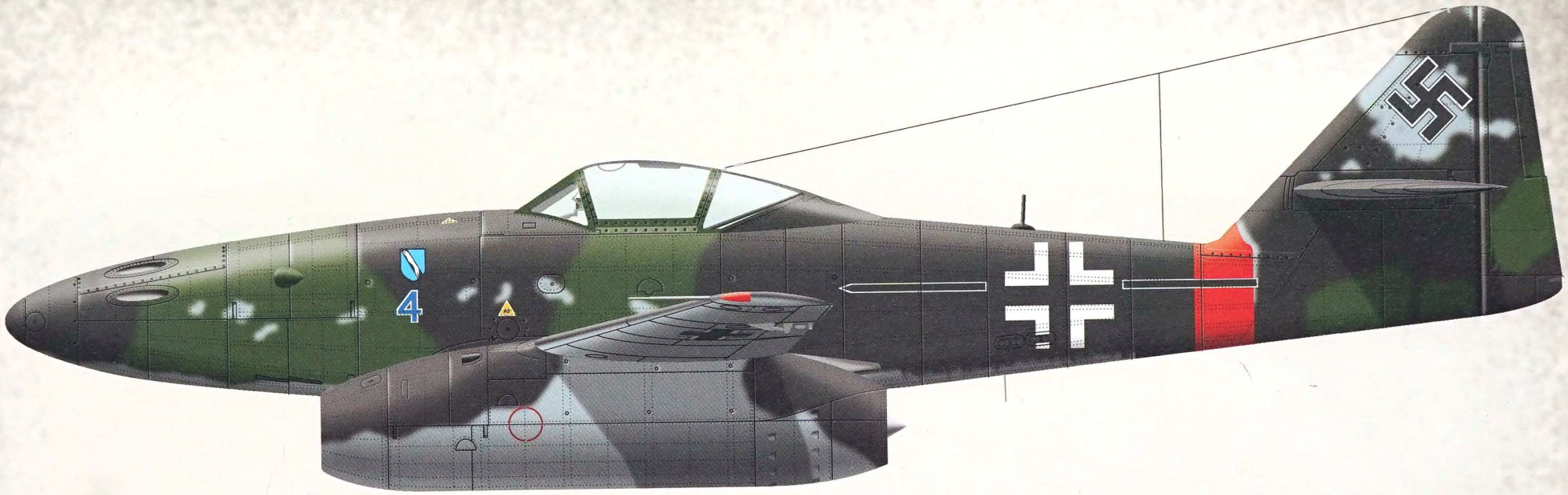
Me 262 A-1a, "Blue 1" of Stab. III./JG 7 at Parchim, March 1945. Personal aircraft of Major *Rudolf Sinner. Aircraft in RLM 82/81/76.*



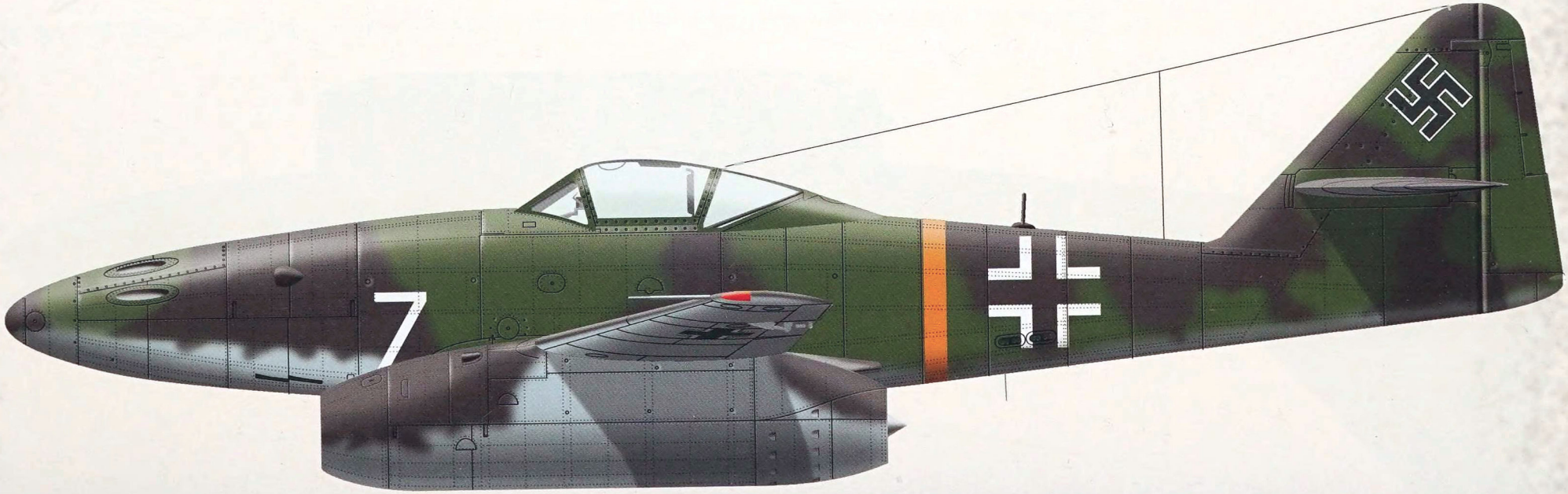
Me 262 A-1a, "Blue 2" of Stab. III./JG 7 at Branderburg-Briest, April 1945. Aircraft in RLM 82/76 camouflage with patches in RLM 81.



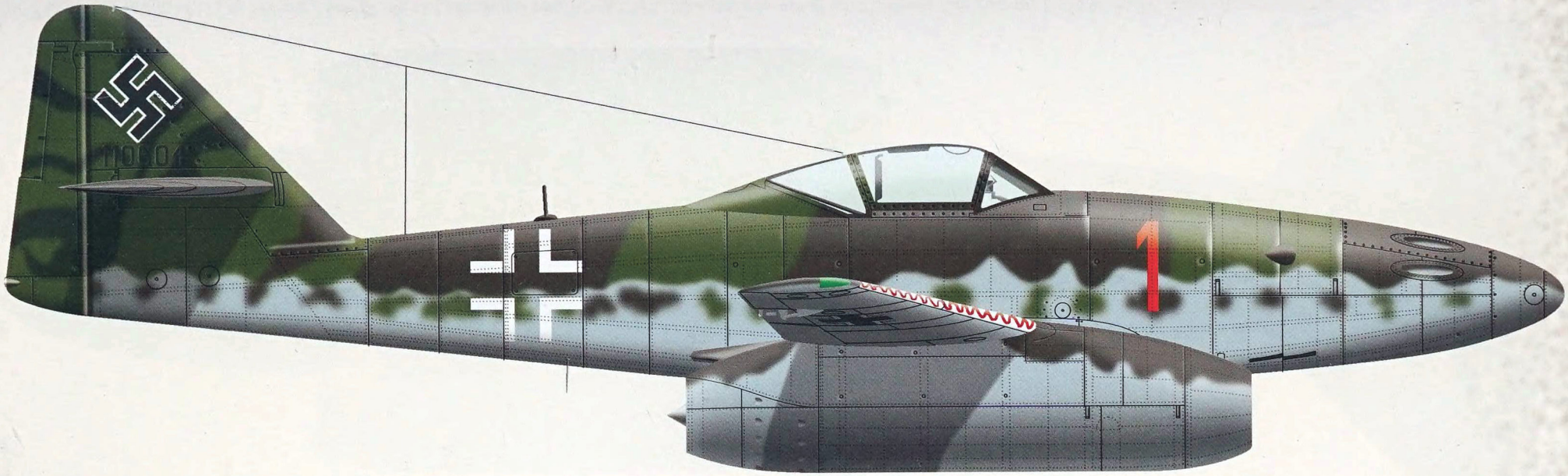
Me 262 A-1a, "Green 3" Stab./JG 7 at Branderburg-Briest, early 1945. Aircraft in RLM 82/76 camouflage with patches in RLM 81.



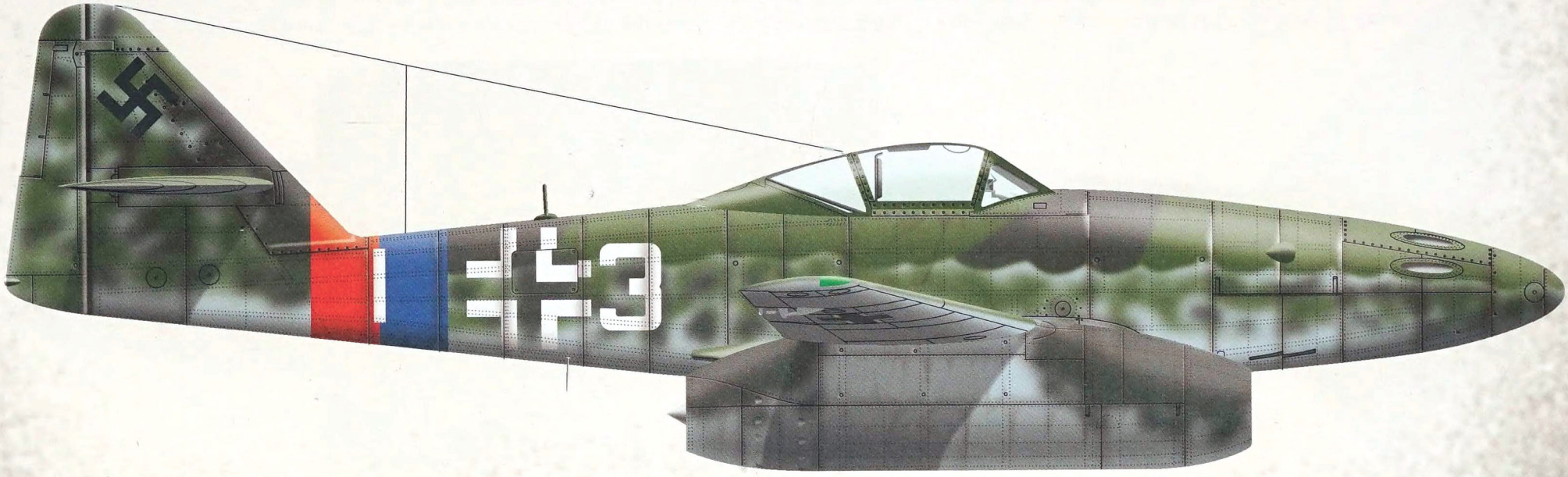
Me 262 A-1a, "Blue 4" of Stab. III/JG 7 at Branderburg-Brest, 1945. Personal aircraft of Major *Theo Weissenberg. Aircraft in RLM 82/81/76 with patches in RLM 76.*



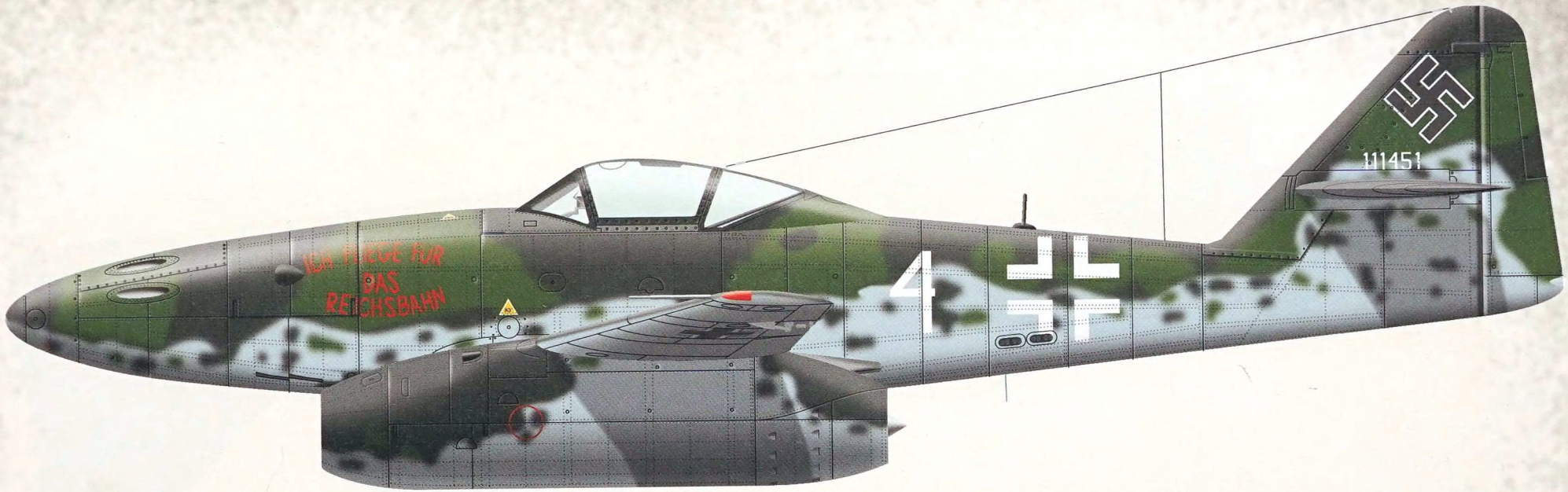
Me 262 A-1a, "White 7" of III./JG 7, at Branderburg-Briest, December 1944. Personal aircraft of Herman Buchner. Aircraft in RLM 82/81/76 camouflage.



Me 262 A-1a, W.Nr. 110604, "Red 1" of JG 1, spring 1945. Aircraft in RLM 82/81/76 camouflage with additional patches in RLM 81 and RLM 82. Patches on the fin in different colour, probably in RLM 75 or RLM 83. Wing leading edges – white with red waves.

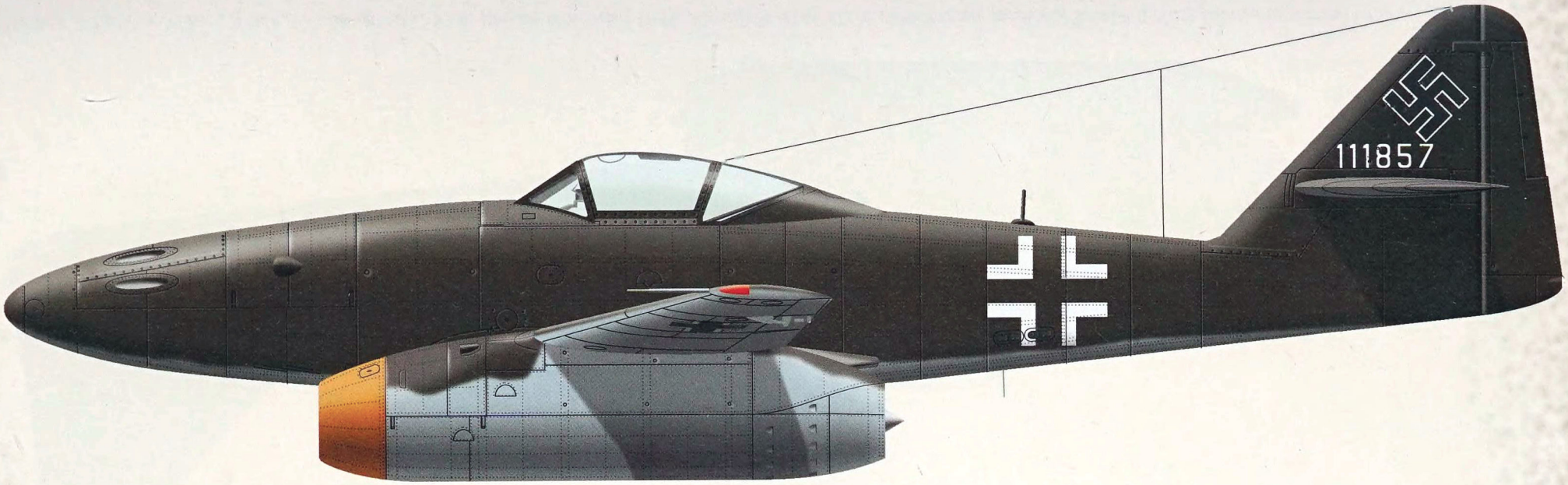


Me 262 A-1a, W.Nr. 500071, "White 3" of 9./JG 7. On 25 April 1945 aircraft piloted by Fhr. *Hans-Giodo Mutke landed at Zurich-Dubendorf in Switzerland. Aircraft was returned to Germany in 1957 and now is in Deutsches Museum at München.*

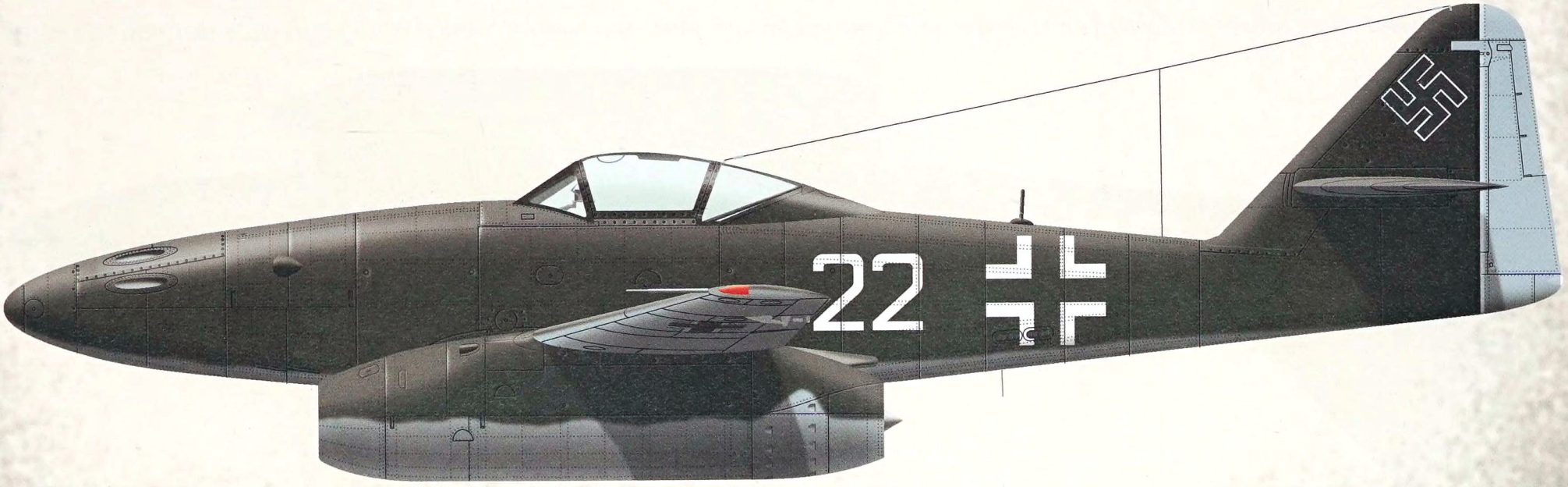


Me 262 A-1a, W.Nr. 111451, "White 4" of JV 44. Personal aircraft of Hainrich Wübke. Aircraft in RLM 82/81/76 camouflage with patches in RLM 81 and RLM 82. Red inscription "Ich fliege für das Reichsbahn" *(I'm flying for German Railway) was painted because Wübke was shot down three times and every time was travelling back by train.*

Me 262 A-1a, W.Nr. 111174, "White 7" of JV 44 at München-Riem, April 1945. Personal aircraft of Obstl. *Heinz Bär. Aircraft in RLM 81/76 camouflage.*



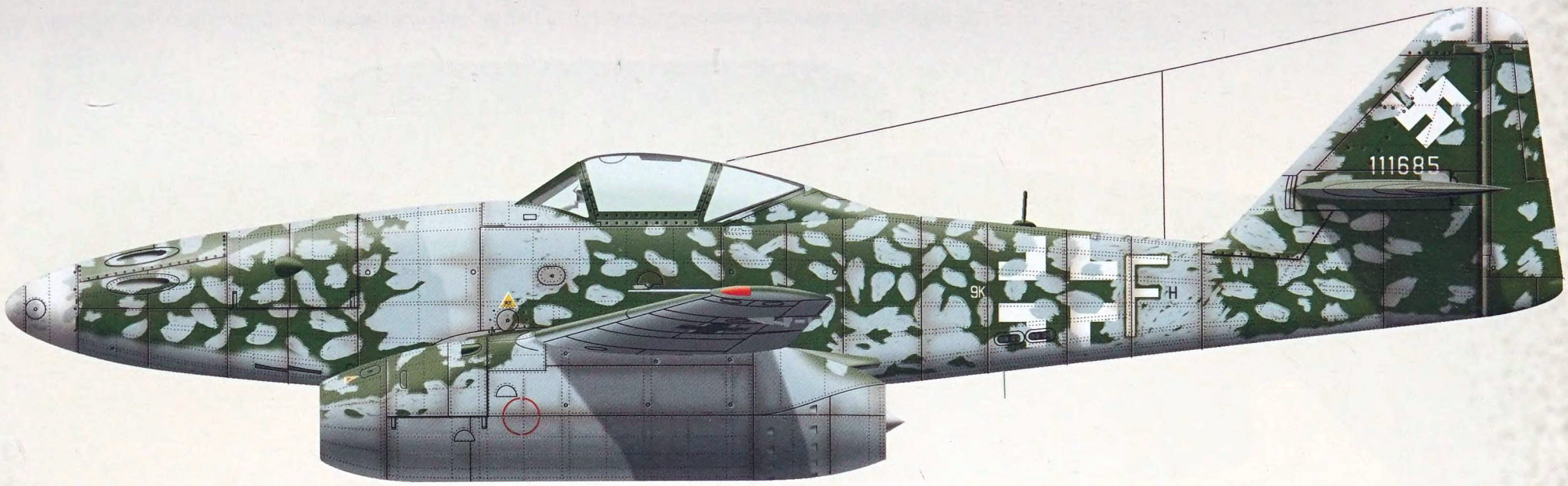
Me 262 A-1a, W.Nr. 111857 of JV 44 at Insbruck, Austria, May 1945. Aircraft in RLM 81/76 camouflage with yellow engine nacelle fronts.



Me 262 A-1a, "White 22" of JV 44, May 1945 at Salzburg, Austria. Aircraft in RLM 81/76 camouflage. Rudder painted in RLM 76.

Me 262 A-2a, W.Nr. 170096, 9K+BH of 1./KG 51 at Rheine, September 1944. Aircraft in RLM 82/76 with sprayed patches of RLM 83. Nose, fin tip and guns outlets in white.

*Me 262 A-1a/*Jabo, *W.Nr. 170064, 9K+BK of 2./KG 51 at Rheine, November 1944. Aircraft in RLM 82/76 with sprayed patches of RLM 83. Nose painted in red and white.*

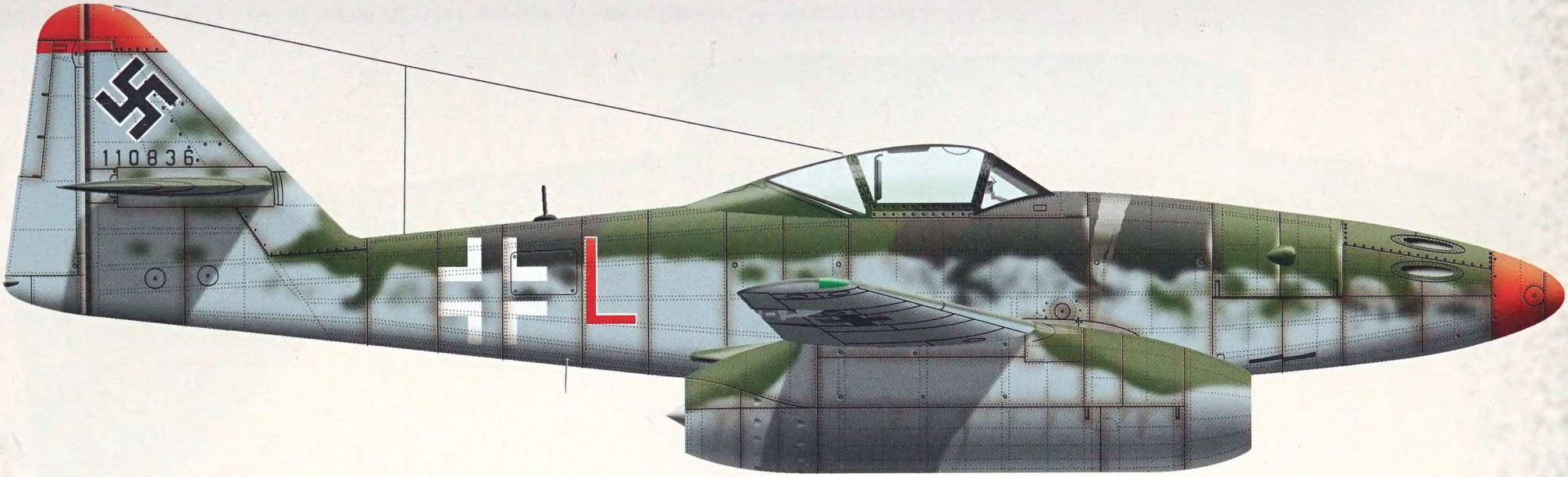


*Me 262 A-1a/*Jabo, *9K+FH of I/KG(J) 51 "Edelweiss" at Riem, April-May 1945. Aircraft in RLM 82/76 with sprayed patches of RLM 76, nose in white.*

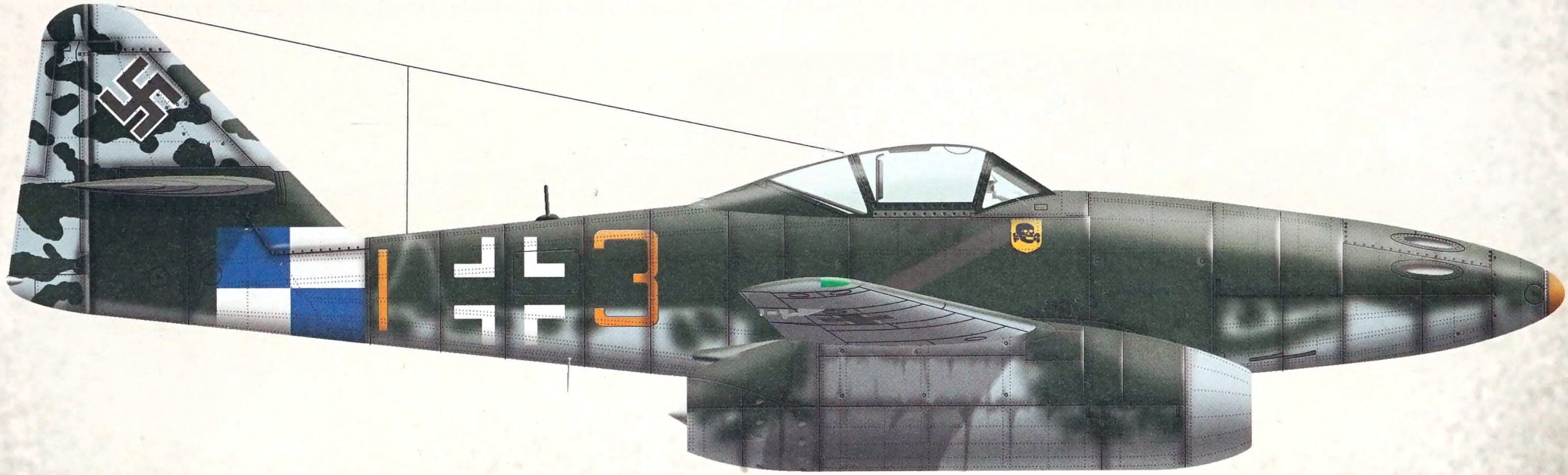
*Me 262 A-1a/*Jabo, *W.Nr. 110571, 9K+HN of 5./KG(J) 51. Personal aircraft of* Fw. *Witzmann. Aircraft in RLM 82/83/76 camouflage with RLM 76 waves.*

Me 262 A-2a, 9K+BN of 5./KG(J) 51 at Schwäbisch Hall, December 1944. Aircraft in RLM 82/81/76 camouflage with waves in RLM 76.

Me 262 A-2a, 9K+NL of 5./KG(J) 51 at Schwäbisch Hall. Aircraft in RLM 82/81/76 camouflage with waves in RLM 76.

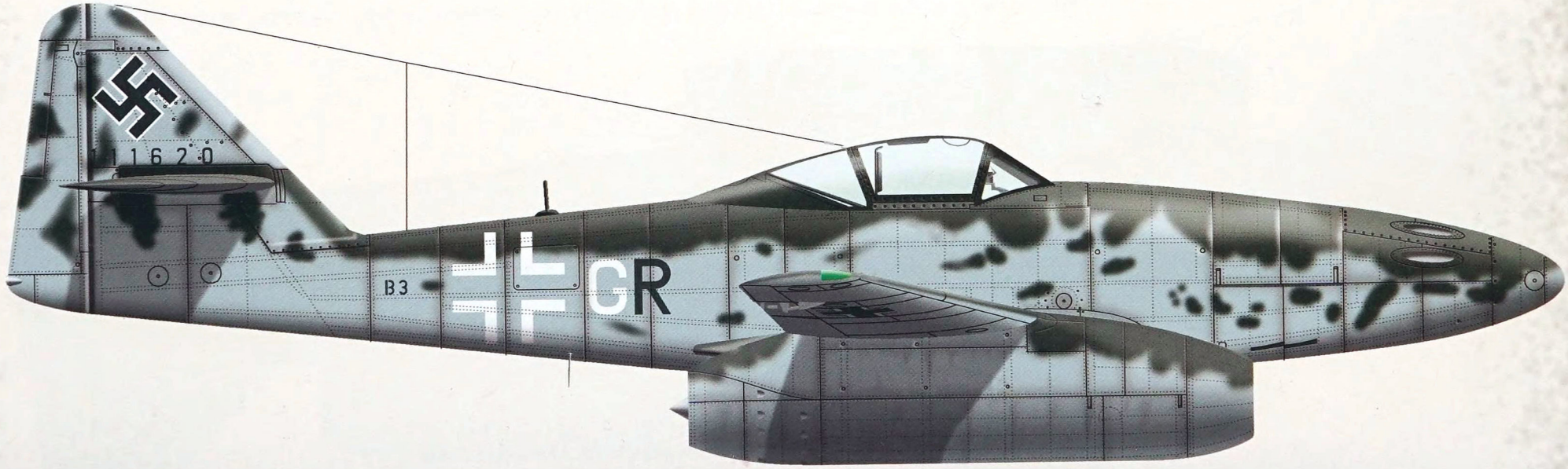


Me 262 A-1a, W.Nr. 110836, 9K+LK of I./KG(J) 51, Germany 1945. Aircraft in RLM 82/81/76 camouflage. Nose and fin tip in red.



Me 262 A-1a, "Yellow 3" of 9./KG 54, spring 1945. Aircraft was previously used by JG 7 (see characteristic JG 7 painted fin). Aircraft in RLM 83/76 camouflage.

Me 262 A-1a of 8./KG 54 at Neuburg an der Donau, Germany, March 1945. Aircraft in unusual camouflage RLM 82/83/76. Note missing swastika, no unit code and heavy weathering.



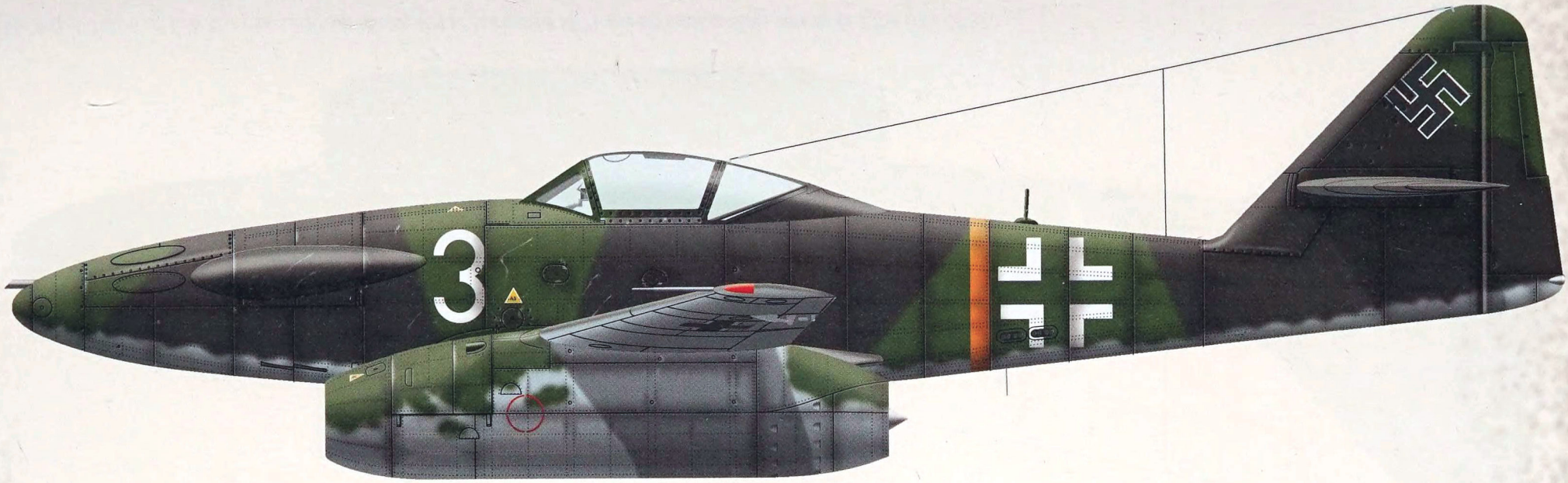
Me 262 A-1a, W.Nr. 111620, B3+GR of 7./KG(J) 54 at Neuburg an der Donau, February 1945. Aircraft painted in RLM 74/76.

Me 262 A-1a, B3+EK of 2./KG(J) 54 at Giebelstadt, May 1945. Aircraft in RLM 82/76 camouflage.

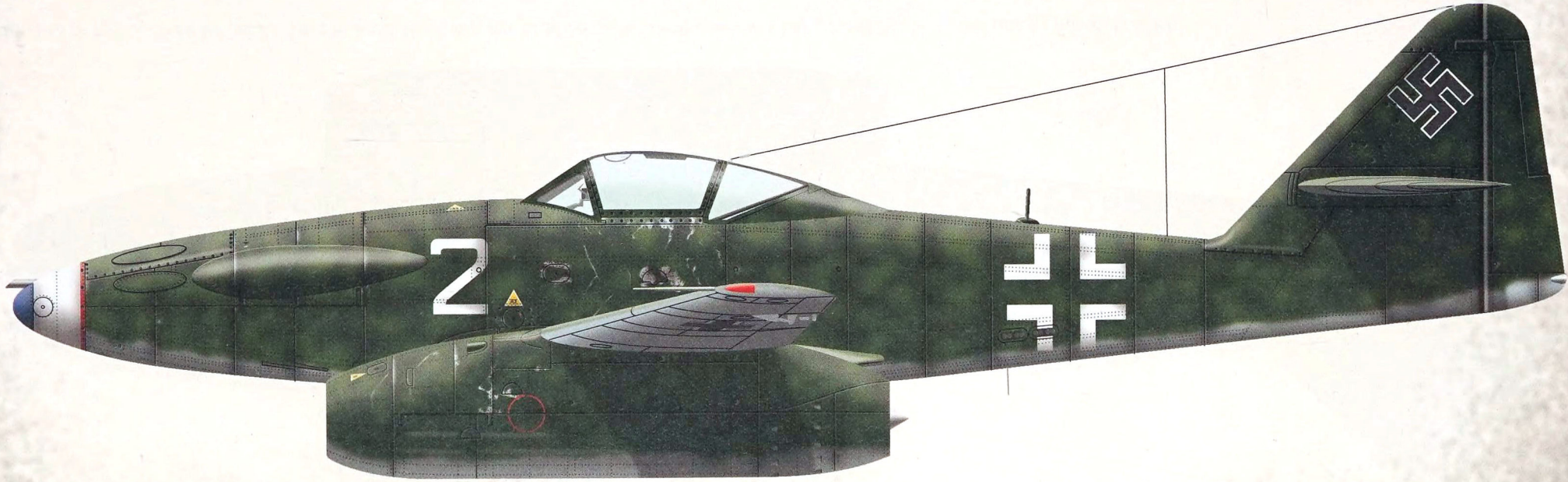
Me 262 A-2a, B3+BH of 1./KG(J) 54 at Neuburg an der Donau. Aircraft in 82/76 camouflage with scribble pattern in RLM 76.

Me 262 A-1a, B3+BC of 7./KG(J) 54 at Neuburg an der Donau, March 1945. Personal aircraft of Ofw. *Friedrich Gentsch. Aircraft in RLM 81/76 camouflage.*

Me 262 A-1a, "Black D" of Kommando *Schenk at Rheine, September 1944. Aircraft in RLM 74/75/76 camouflage.*



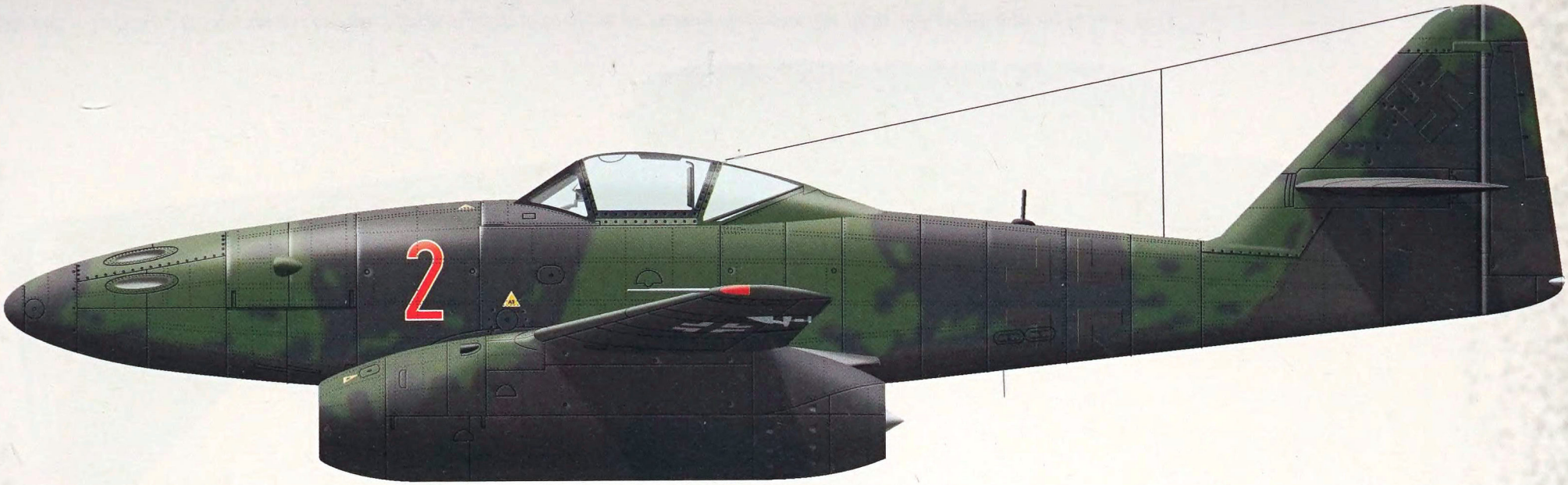
Me 262 A-1a/U3, "White 3" of Kommando *Braunegg at Münster Herzogenaurach, autumn 1944. Aircraft in RLM 82/81/76 camouflage.*



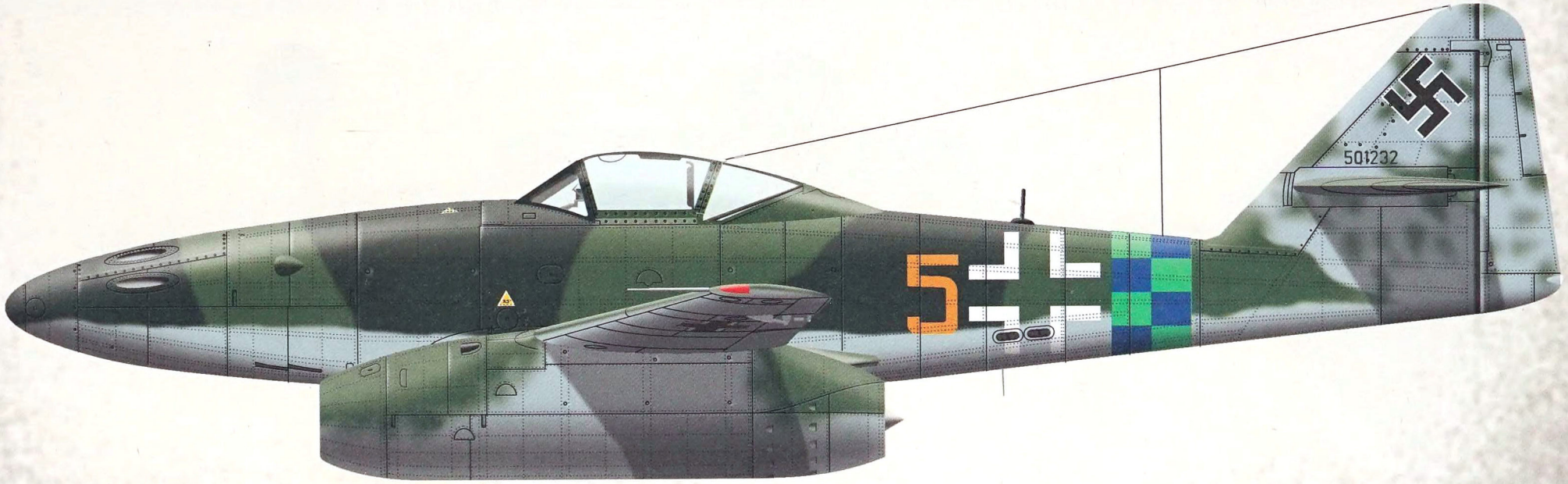
Me 262 A-1a/U3, "White 2" of 1./NAGr 1 at Zebrst, April 1945. Aircraft in RLM 82/76 camouflage with patches in RLM 83.

Me 262 A-1a/U3, "Red 34" of 2./NAGr 6, April 1945. Aircraft RLM 76 overall with waves in RLM 74 and 81. Nose and canopy frames in black.

Me 262 A-1a/U3 of 1./NAGr 6 at Lechfeld, March 1945. Aircraft RLM 76 overall with scribble pattern in RLM 02 and 83.

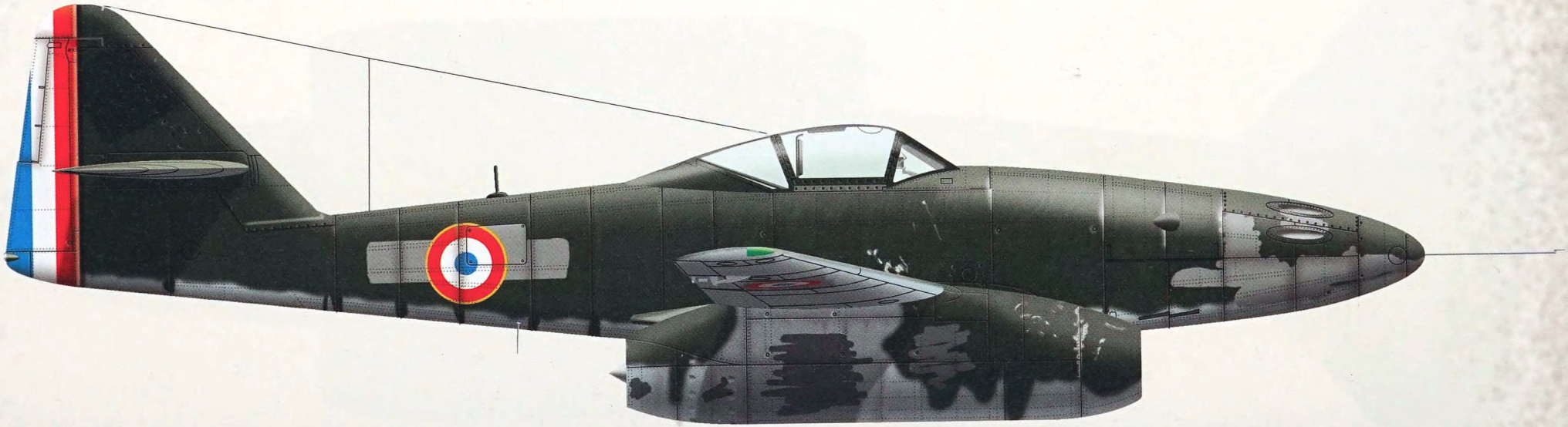


Me 262 A-1a, "Red 2" of 10./NAGr 11. Personal aircraft of Karl Hainz Becker. Aircraft in RLM 82/81/22 camouflage.

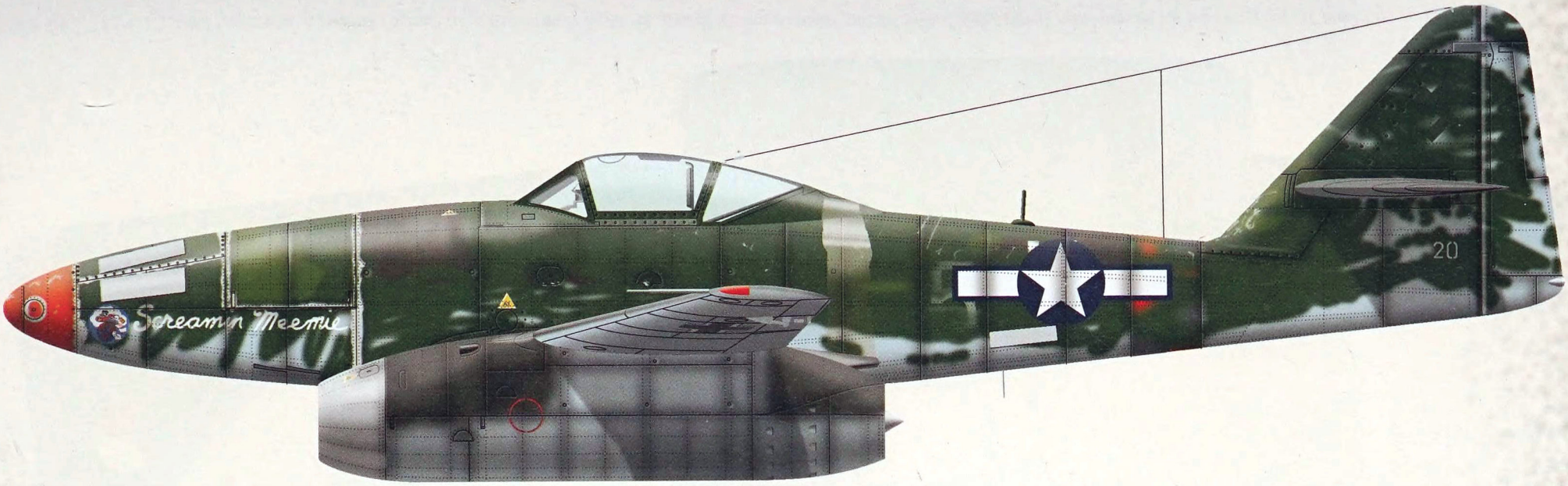


Me 262 A-1a, W.Nr. 501232, "Yellow 5" of Industrie Schwarm, *May 1945. Aircraft in RLM 82/83/76 camouflage.*

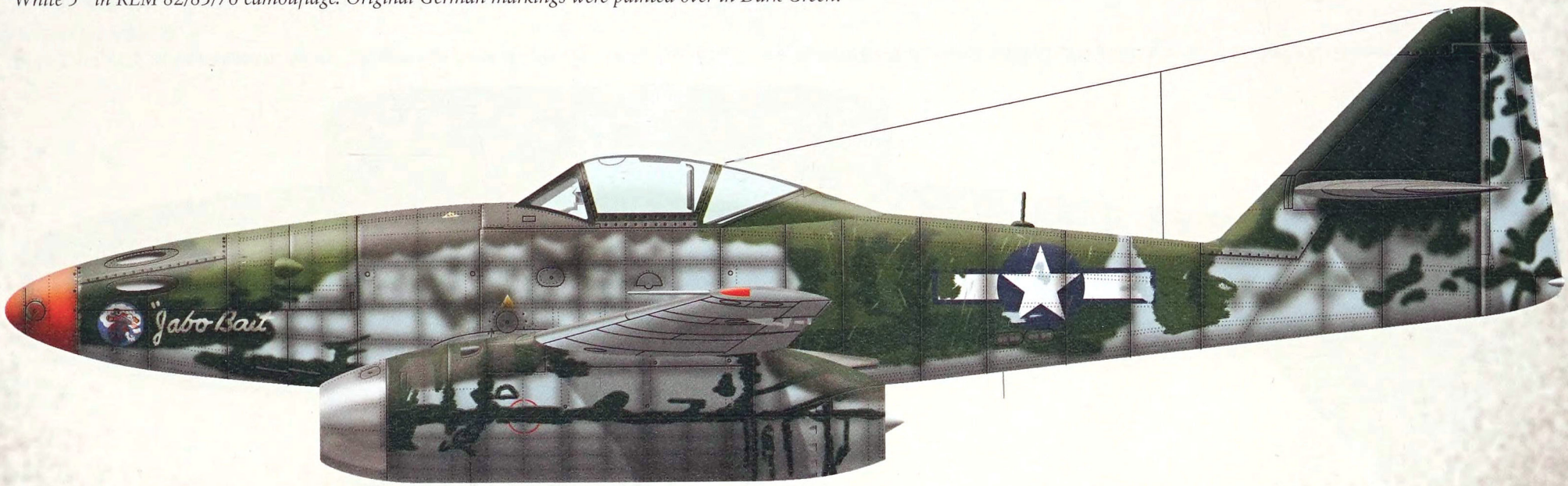
Me 262 A-1a/U-4 (the second V4 prototype) W.Nr. 170083 depicted after capture by American forces. Aircraft in typical RLM 82/81/76 camouflage with overpainted German markings. American name "Wilma Jeanne"



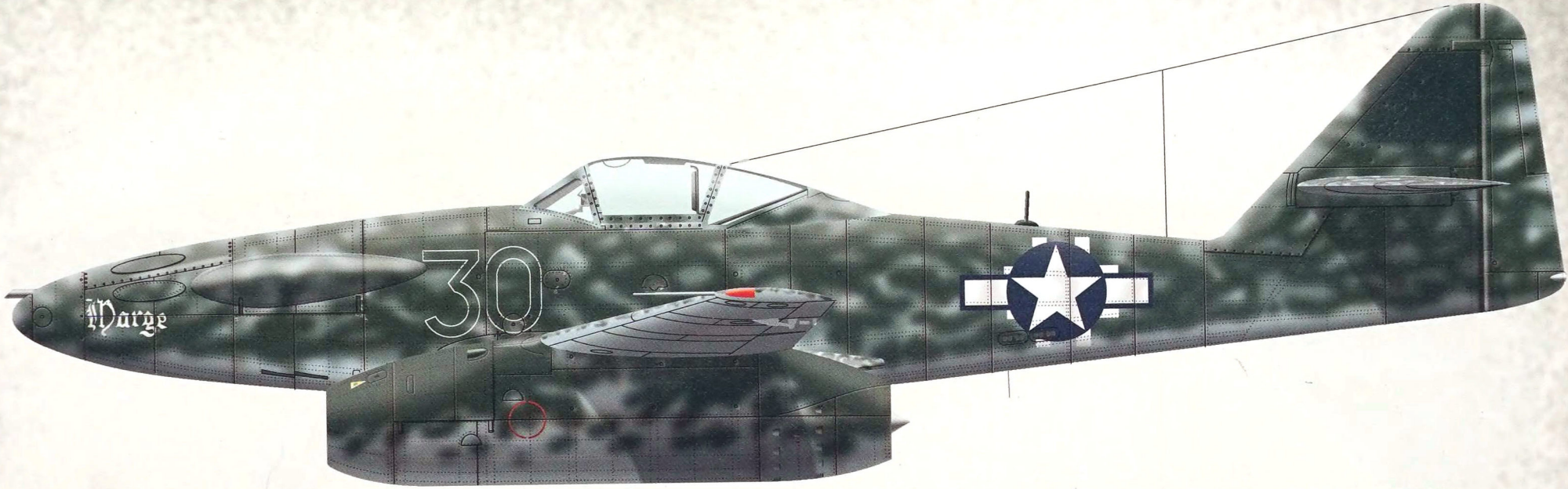
Me 262 A-1a W.Nr. 113332 captured by French forces. Aircraft received French markings before its first flight with French pilot on 16 June 1945.



Me 262 A-1a, "Screamin Meemie" of "Watson's Whizzers", at Naval Air Station at Patuxent River, Maryland, January 1946. Pilot lt. Robert Stobell. Aircraft originally was used in KG(J) 54, "White 5" in RLM 82/83/76 camouflage. Original German markings were painted over in Dark Green.

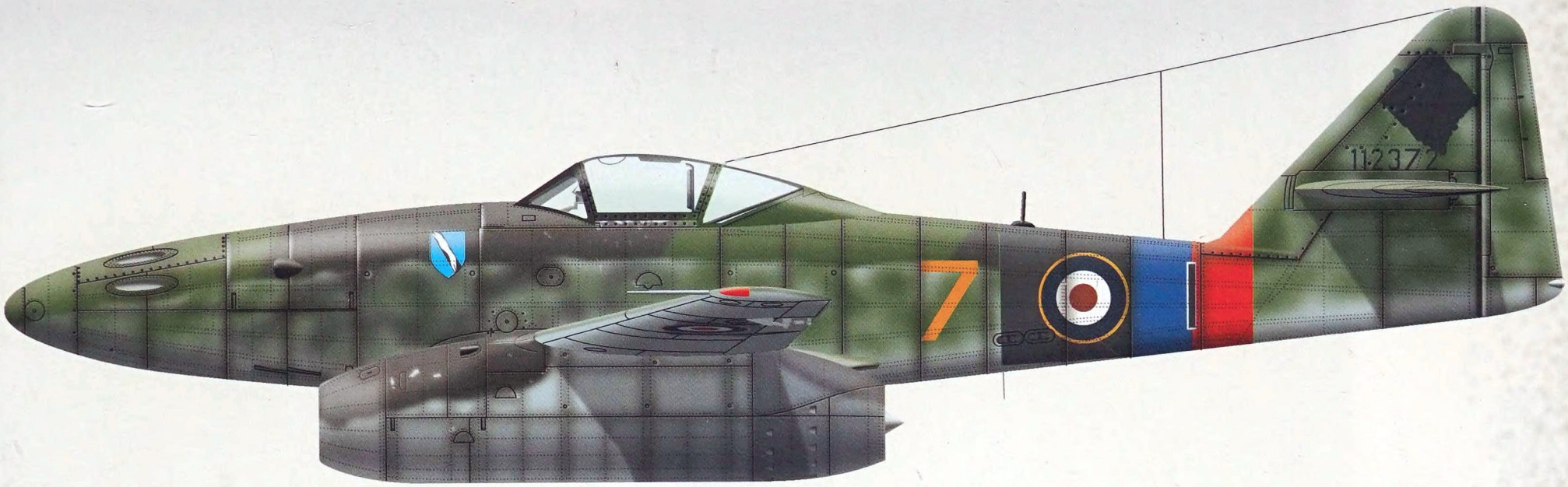


Me 262 A-1a W.Nr. 113367 captured by "Watson's Whizzers". Aircraft received name "Jabo Bait" *and was tested by Lt. William Haynes. Aircraft in typical RLM 82/81/76 camouflage heavy retouched.*

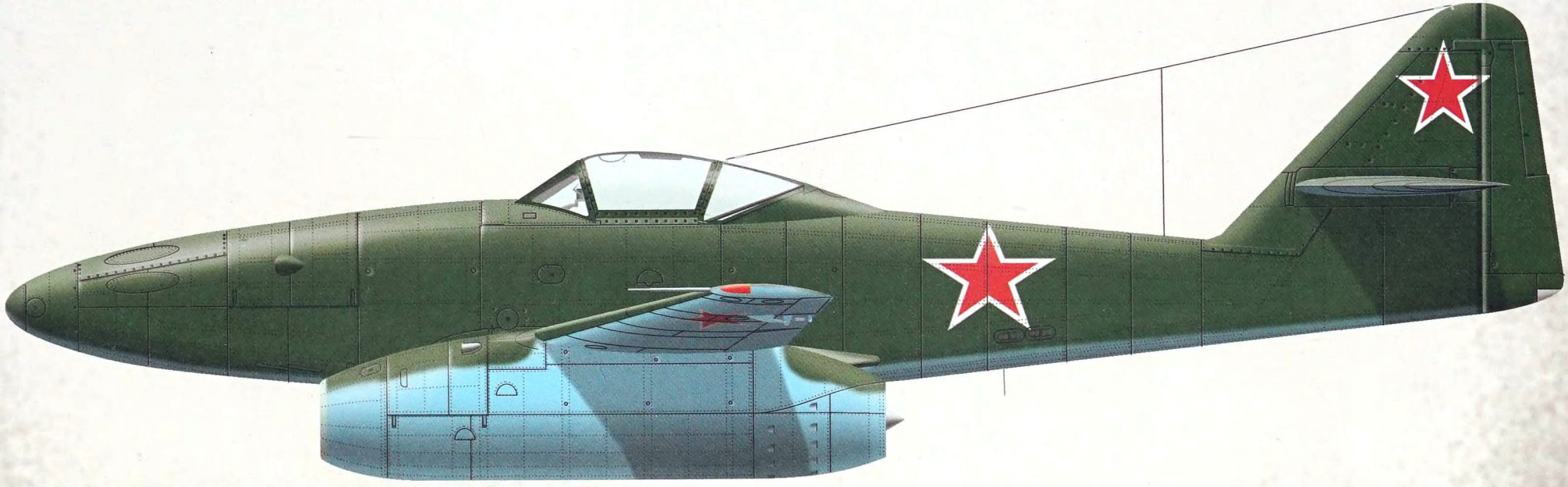


Me 262 A-1a/U3 W.Nr. unknown. Name "Marge" was painted after capture by American forces. Aircraft RLM 76 overall with scribble pattern in RLM 02 and 83. German markings over-painted after capture.

Avia S-92, "PL-01", S-92 prototype. Aircraft in colour close to German RLM 02 overall with red arrow on the nose. Czechoslovak markings (with blue trim) in six positions.



Me 262 A-1a, W.Nr. 112372 "Yellow 7", captured by UK troops on 6 May 1945 in Lubeca. Aircraft was piloted by Wing Commander Warren Schrader. Aircraft in RLM 82/81/76 camouflage. German insignia were painted over with black paint.

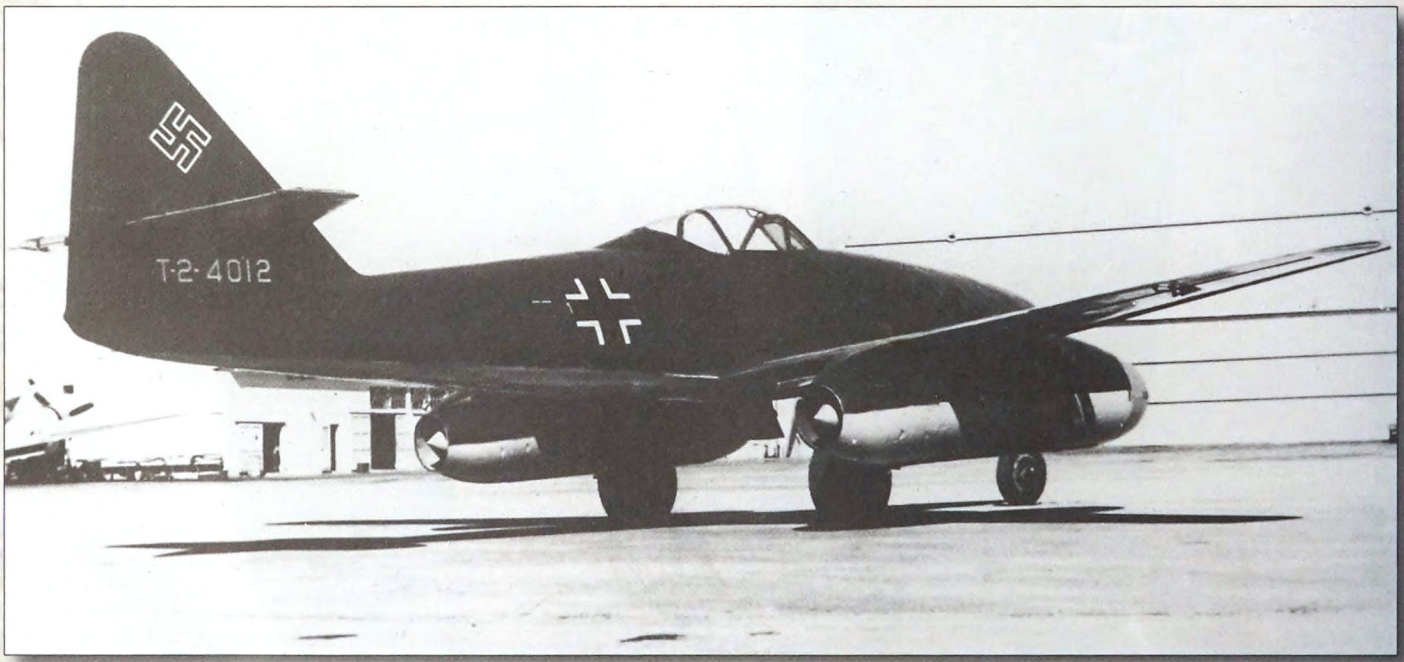


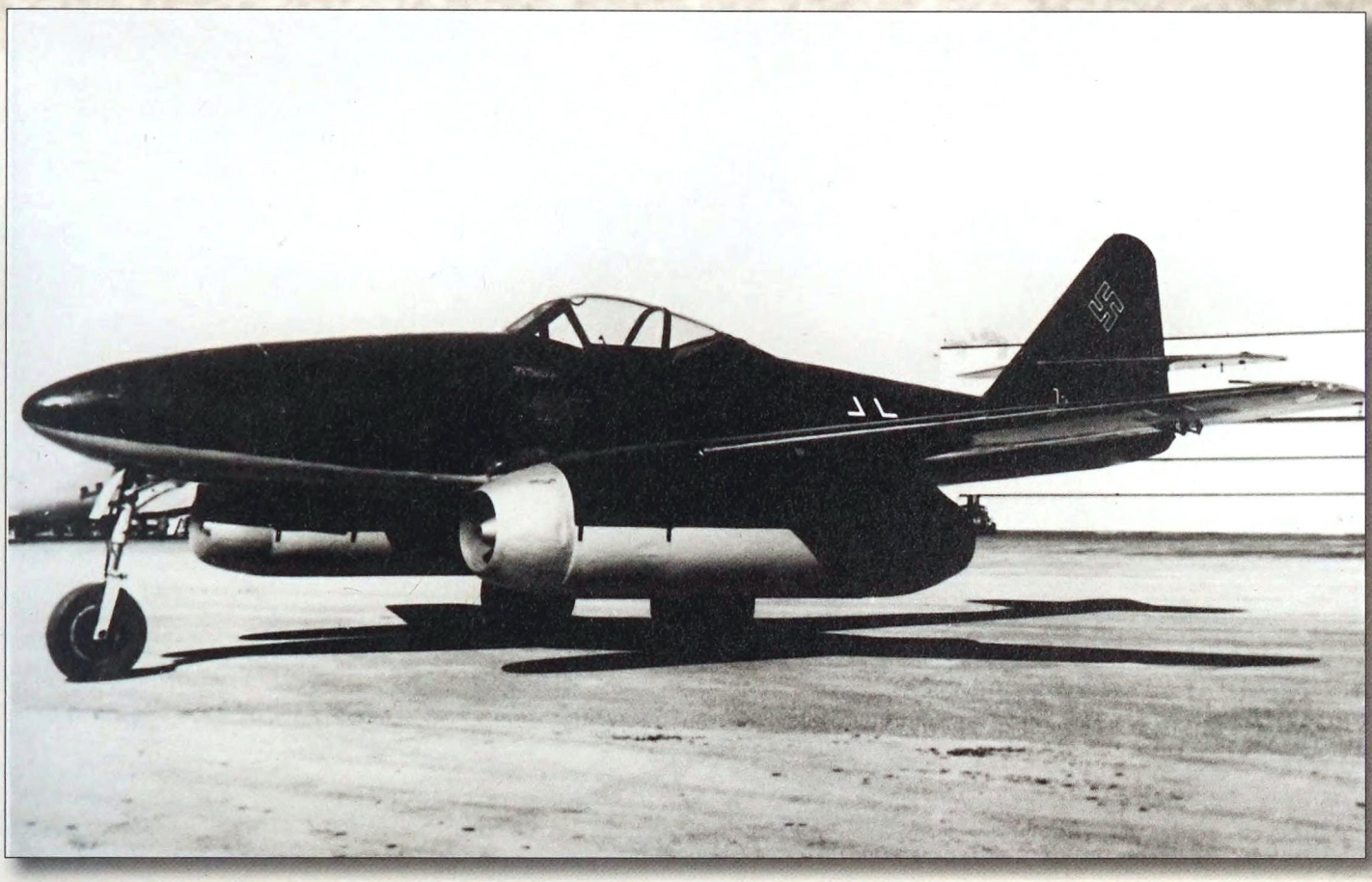
Me 262 tested in Russia. Russian Green/Light Blue camouflage. Soviet stars in six positions. Note that gun blasts were covered.

DETAIL PHOTOS

General View

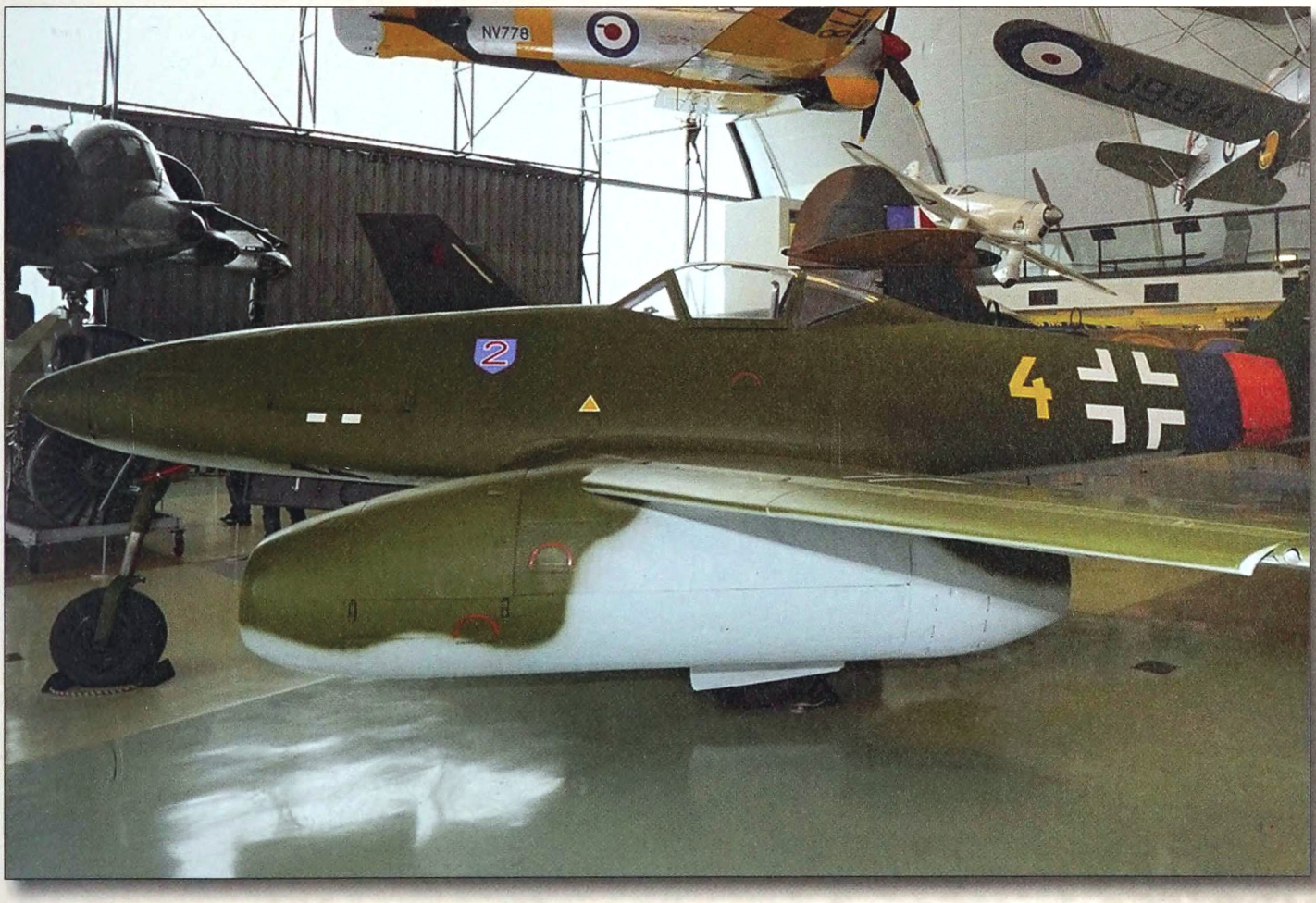
Above. Me 262 A-1a preserved in UK. Aircraft was captured in Fassberg. Originally flew with "Yellow 7" as a machine of I./JG 7. Now this aircraft is on display in RAF Musuem, Hendon. (R. Wallsgrove)
Below: 3/4 rear view of the Me 262 A-1a. Aircraft tested in USA with code T-2-4012. (A. Lochte coll.)



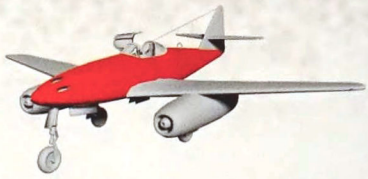


Above: The same aircraft, port side. (A. Lochte coll.)

Below: Me 262 A-1 now in RAF Museum, Hendon, UK. (D. Karnas)

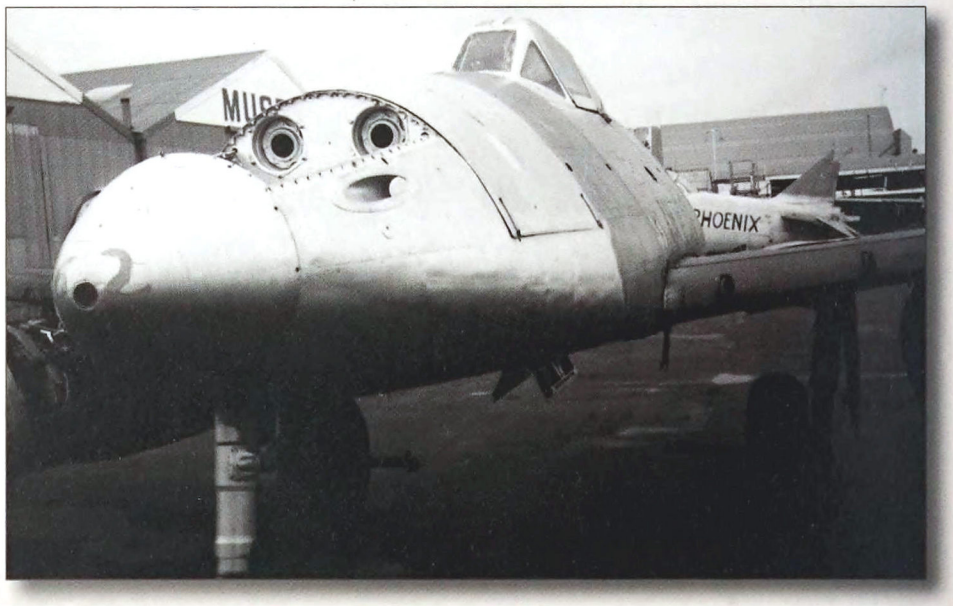


Fuselage



Above: Starboard side of the Me 262 A-1 in the Smithsonian National Air and Space Museum, Washington DC, USA. Aircraft was originally used in II./JG 7, as "Yellow 7". Note that this aircraft has recce nose modified into fighter configuration. (A. Juszczak)

Right: Fuselage, port side just below the cockpit. (A. Lochte)



Me 262 from the front. Aircraft with nose panel removed. (A. Lochte)

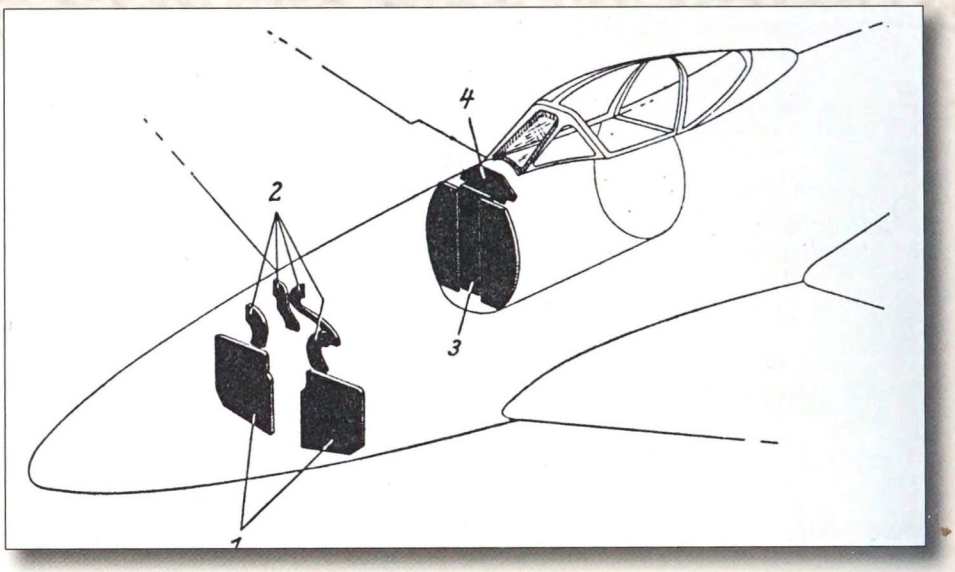
Above: *Front view of the Schwalbe nose. Note the shape of the fuselage. Gun camera (BSK) in the nose is also visible. (R. Pęczkowski)*

Above, left: *3/4 front view of the Me 262. Nose panels are visible. (D. Karnas)*

Left: *Close-up shot of the nose, starboard side. (R. Pęczkowski)*

Nose section of the fuselage. Please note bulges on the gun covers. (A. Lochte)

Drawing showing the Me 262 armoured panels. (Me 262 Handbuch, Technical Manual)

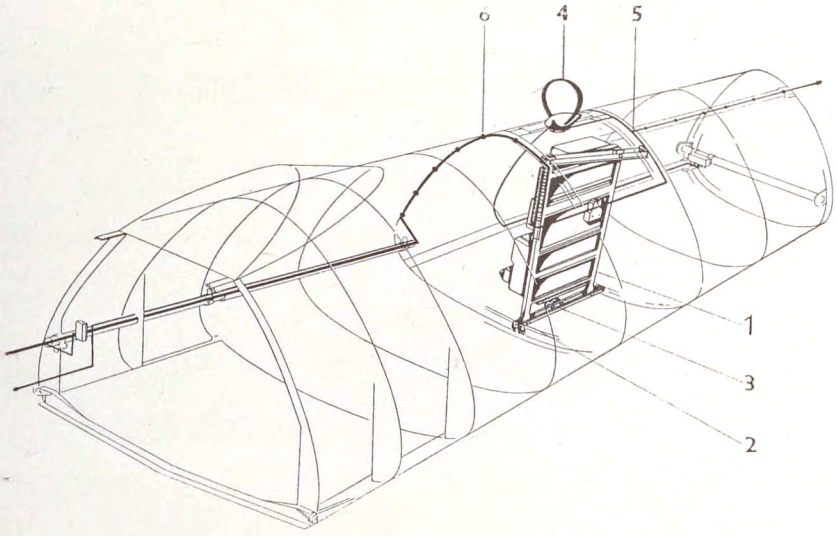


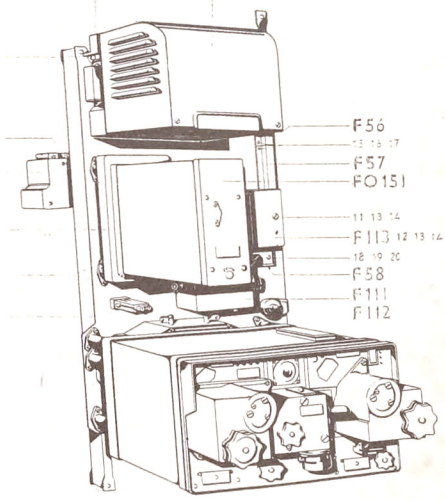
Details of the nose section, port side. (A. Lochte)

Photo showing undersurface of the fuselage just behind the wing. Please note that one of the panels is removed. (A. Lochte)

Left: Port, rear part of the fuselage.

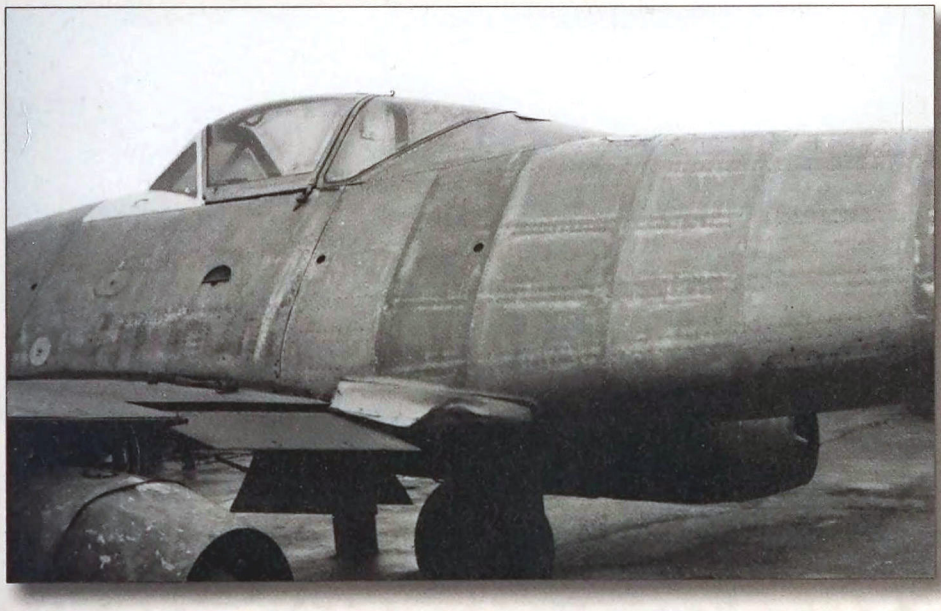
Above: Details of the flare chutes. (Both R. Pęczkowski)



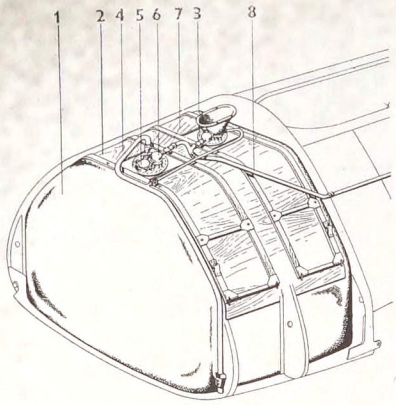


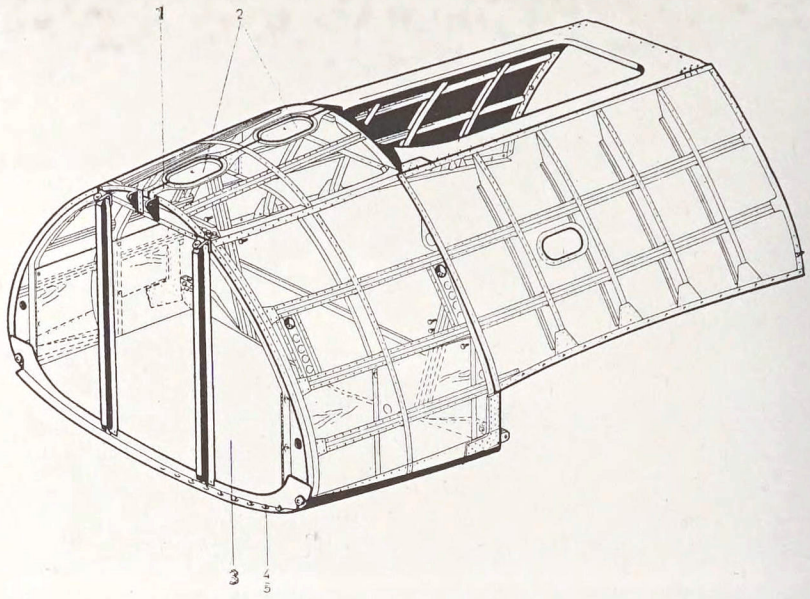
Two drawings showing radio installation (FuG 16 ZY) in the rear part of the fuselage. (Ersatzteil-Liste Me 262):

1. *Main mount*
2. *Attachment*
3. *Adjusting*
4. Peilrahmen *PR-16 direction finding antenna*
5. *Line equipment and cables in the rear*
6. *Pipe fittings.*



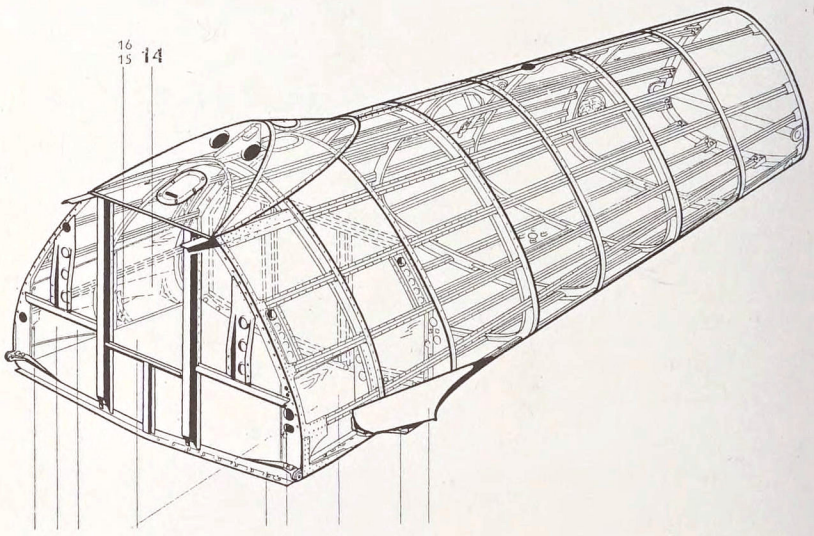
Centre of the fuselage, behind the cockpit. Fuselage panels are visible. (A. Lochte)





*Fuselage construction, (**right**) and one of the fuel tanks (**above**). Central part.*

Central fuselage construction, behind the cockpit. (All drawing from Ersatzteil-Liste Me 262)



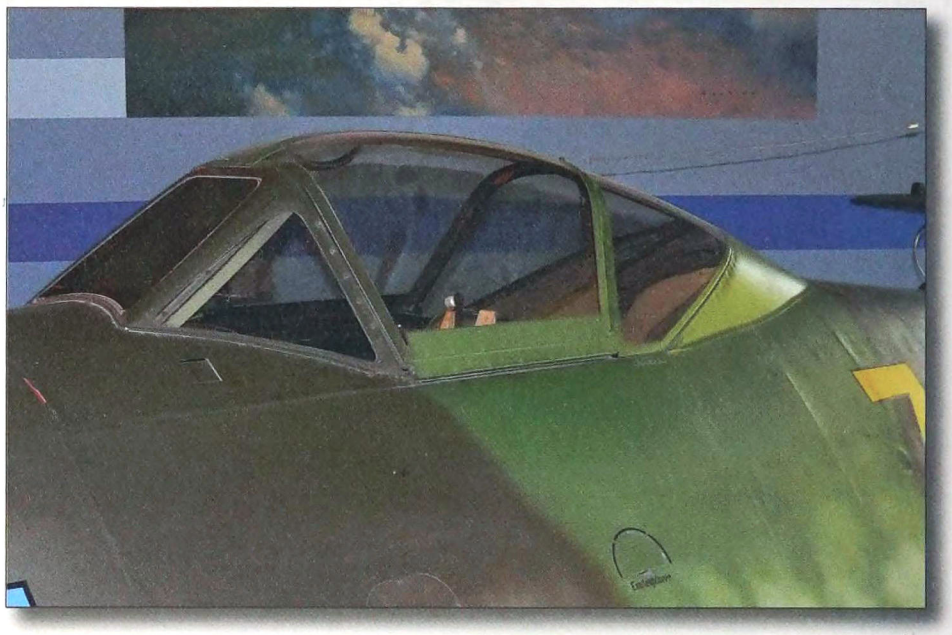
Rear part of the Me 262 A-2a fuselage. Aircraft preserved in Australia. (R. Wallsgrove)

Port, central part of the fuselage, below the canopy. Footstep and hydraulic filler cap are visible. (M. Bronkowski)

Starboard side of the front fuselage, upper cover is removed. Aircraft unpainted. (A. Lochte)

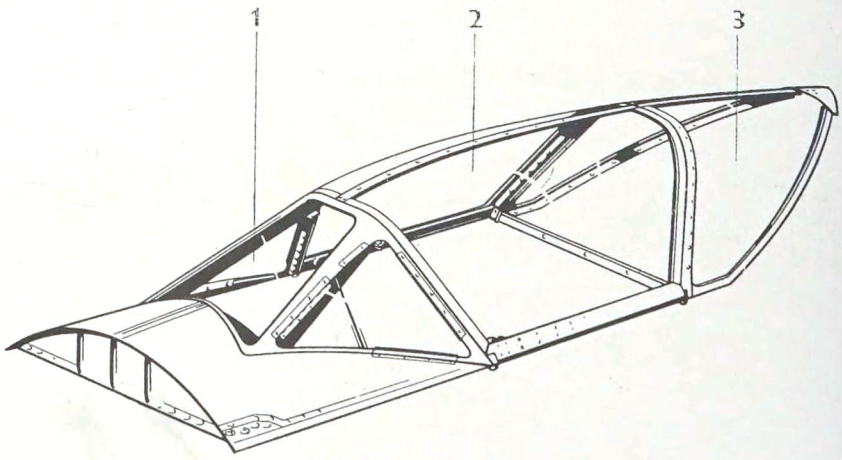
Another view of the starboard side of the fuselage. Engine covers are also visible. (A. Lochte)

Canopy



Port side of the canopy in closed position. Armoured glass windscreen is visible. This aircraft has armoured head rest removed. Note air scoop for cockpit ventilation. (A. Juszczak)

Starboard side of the canopy. The bullet-proof windscreen is 90mm (3.5 in) thick and was electrically heated. (R. Pęczkowski)

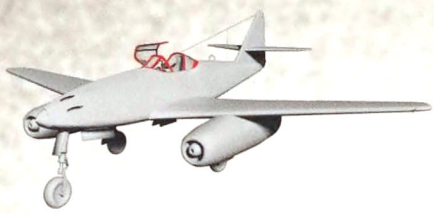


Drawing from Ersatzteil-Liste Me 262 showing components of the canopy.

Close-up view of the windscreen. Bullet-proof windscreen has dimensions of 270 x 370 mm, (10.6 x 14.6 in). (M. Bronkowski)

Canopy in open position. Note the head rest. (M. Bronkowski)

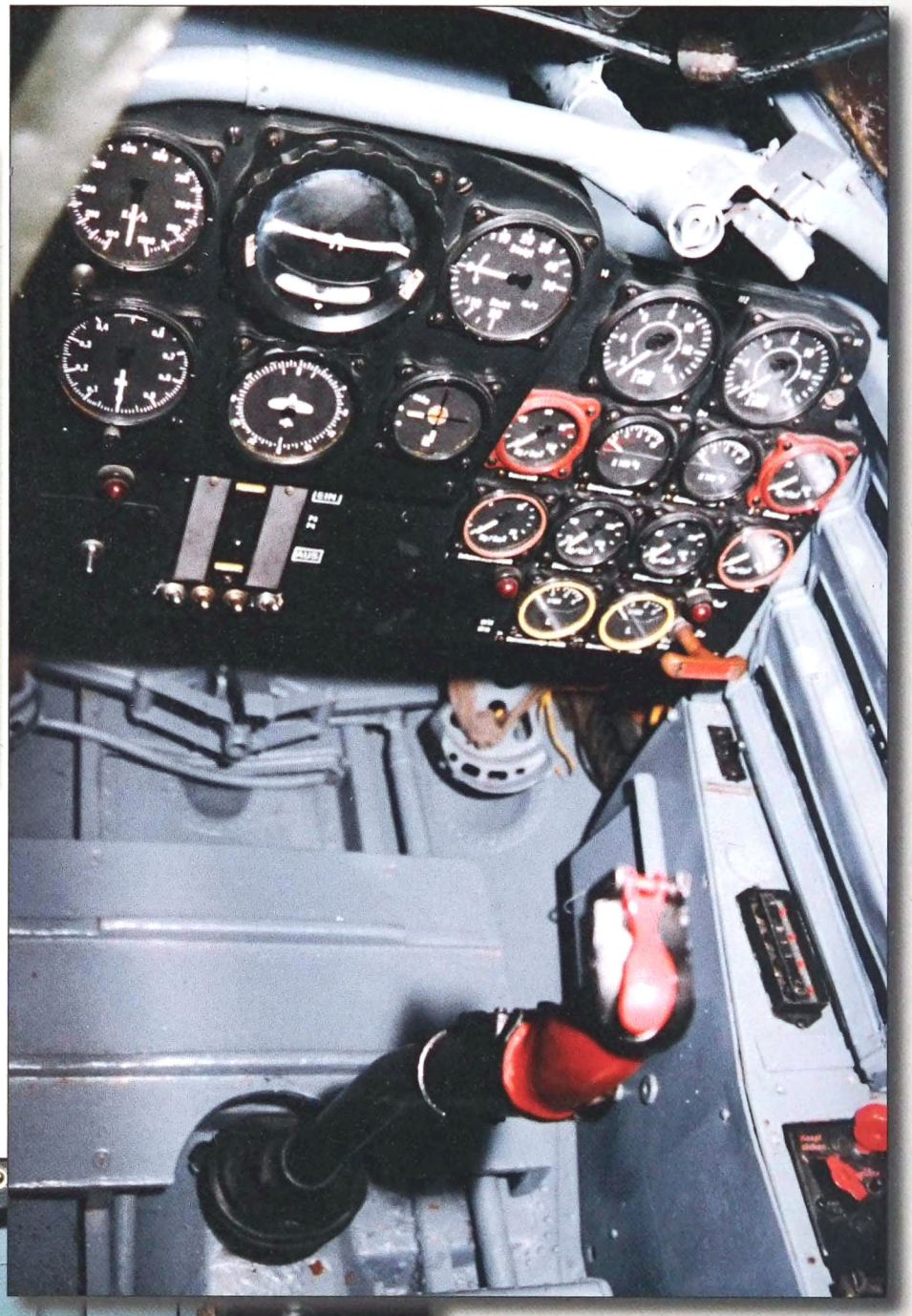
Port side of the canopy, almost side view. (R. Pęczkowski)



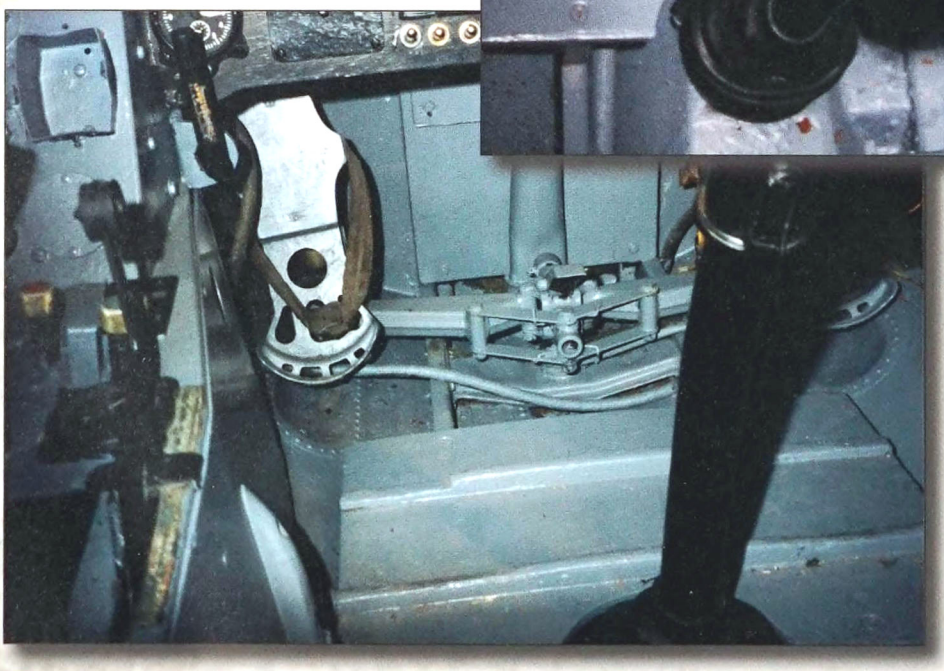
Cockpit

Above: KG 13B control column grip. (R. Pęczkowski)

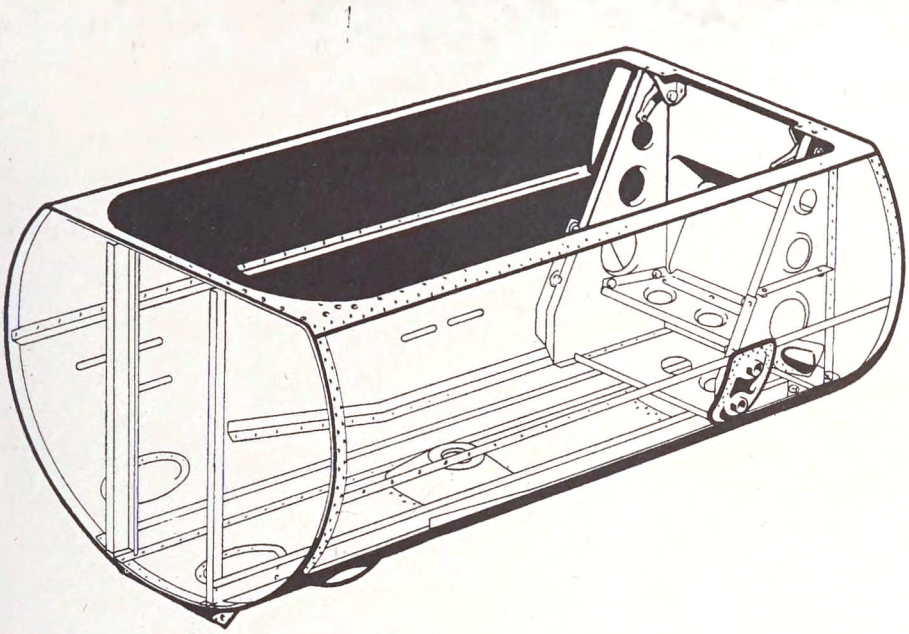
Below: Rudder pedals are visible. (M. Bronkowski)

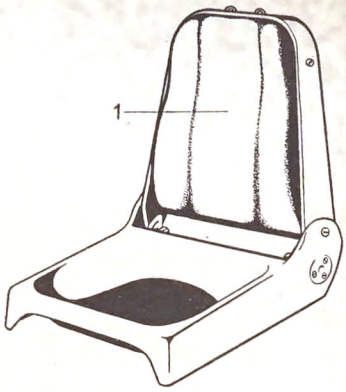


Above: Instrument panel and control column are visible. S-92 Czechoslovak production aircraft. (R. Pęczkowski)



Note: All details photos were taken in the early '90s of the Me 262 preserved at Cosford (except where stated).





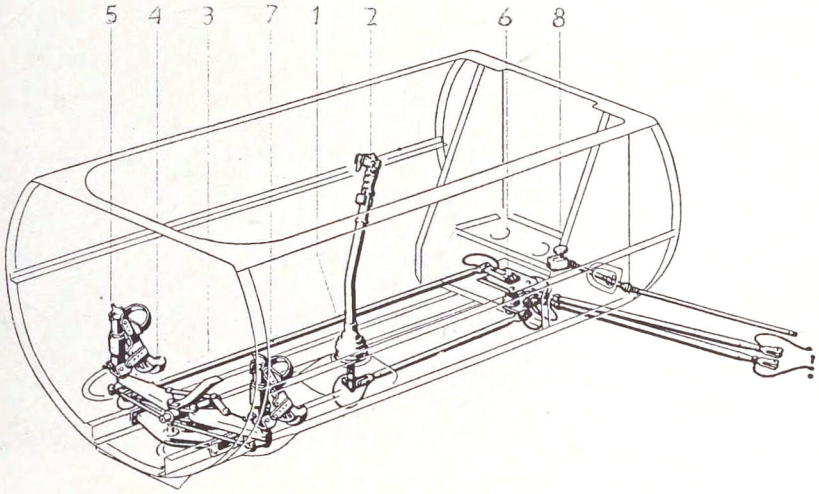
Above: Pilot's seat.

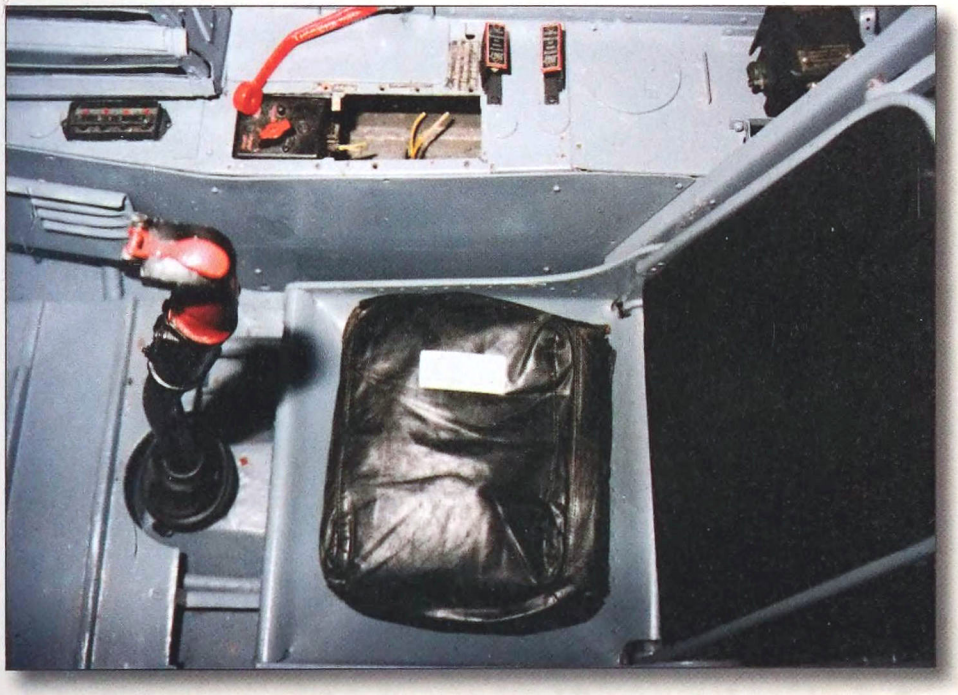
Above, left: Cockpit bathtub, details of the seat mount are shown.

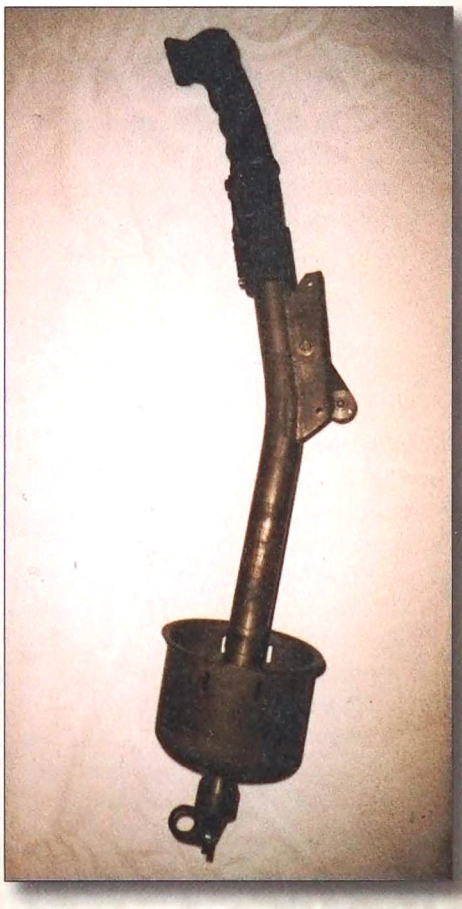
Left: Details of the control system. (All drawings from Ersatzteil-Liste Me 262)

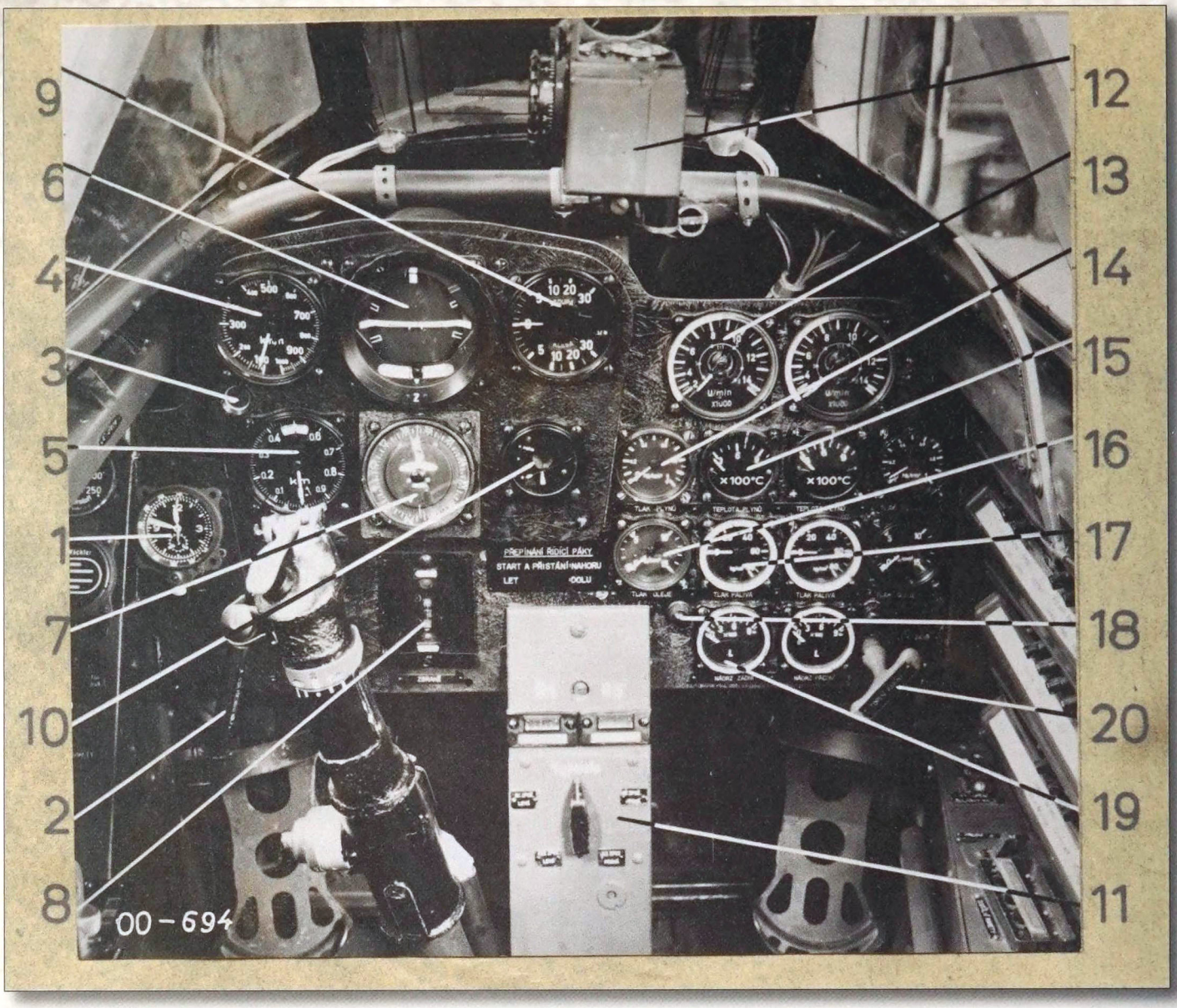
Below, left: Pilot's seat and control column. Note that some components on starboard console have been removed. (M. Bronkowski)

Below: KG 13B control column details. (Stratus coll.)



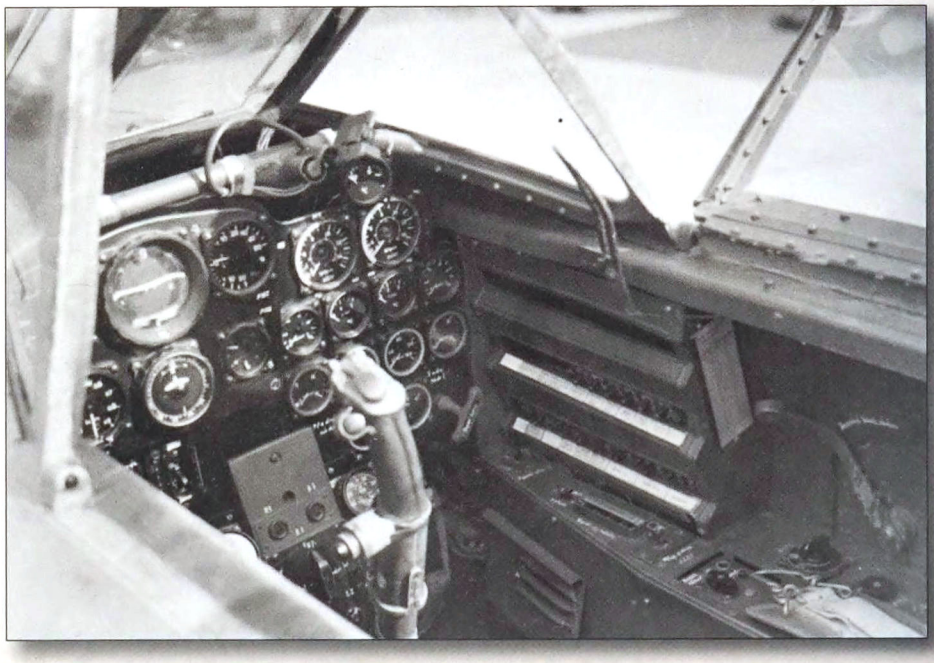


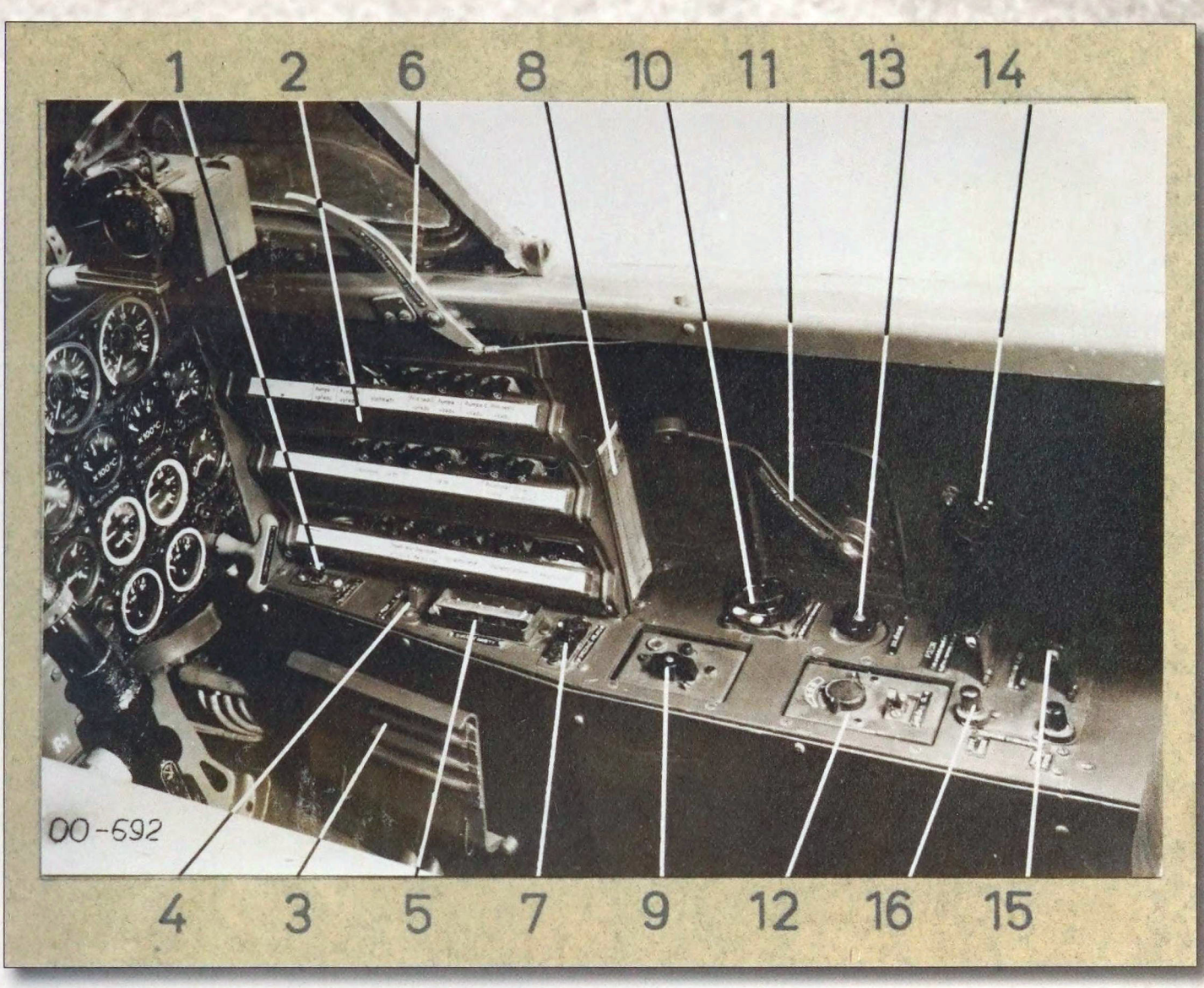




Avia S-92, (Me262 A-1a) Instrument Panel. (B. Kudlička coll.)

1. Chronometer
2. Front wheel brake
3. Heating nozzle speedometer indicator
4. Airspeed indicator
5. Altimeter
6. Artificial horizon
7. Repeater compass
8. SZKK 2 ammo counter
9. Variometer
10. AFN 2 left/right course deviation (radio) indicator
11. Bomb release selector
12. Revi 16B Gunsight in firing position
13. RPM indicator
14. Fuel pressure gauge
15. Fuel temperature gauge
16. Injection temperature gauge
17. Oil pressure gauge
18. Forward tank Iow fuel warning lamp
19. Fuel contents indicator
20. Cockpit heater

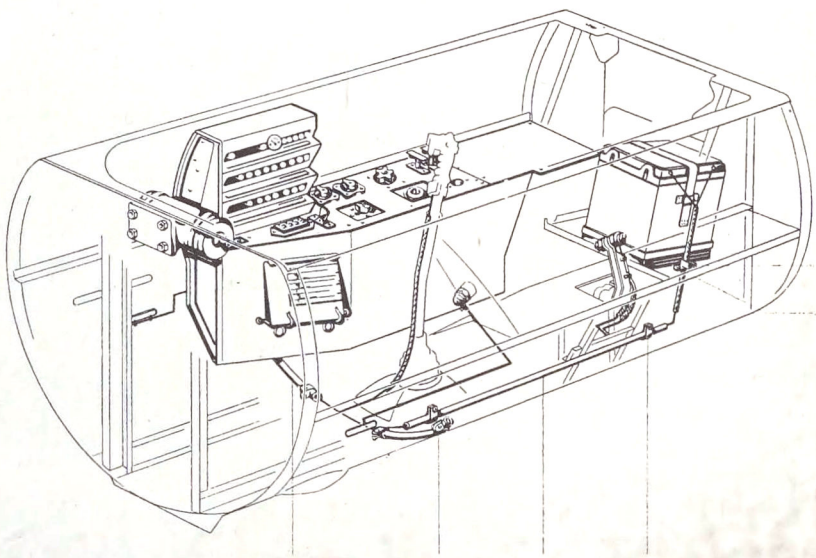


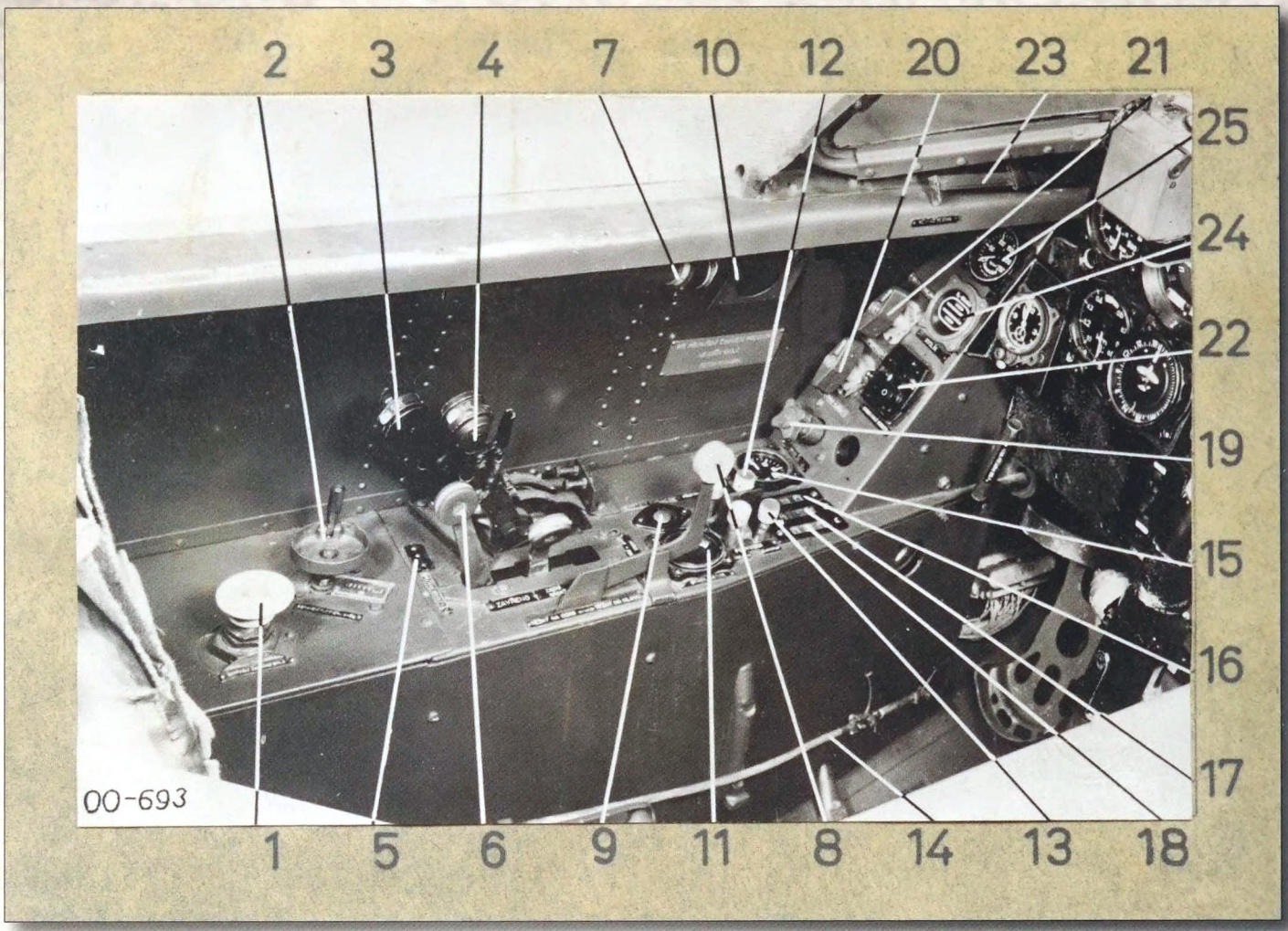


Starboard panel. Avia S-92.
(B. Kudlička coll.)

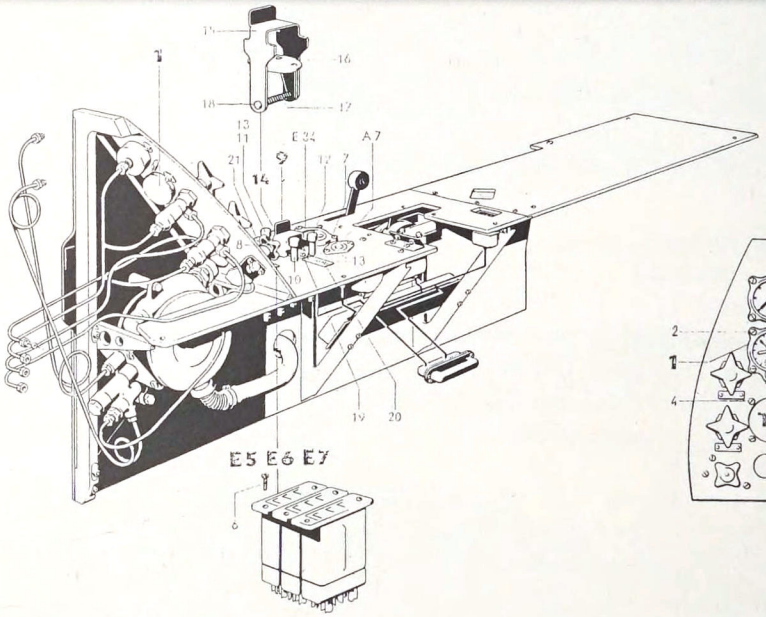
1. *Windshield heating switch*
2. *Main switch board*
3. *Maps case*
4. *Signal flare switch*
5. *Signal flare control box*
6. *Emergency canopy open handle*
7. *FuG 25a (radio) detonator box*
8. *Deviance table*
9. *FuG 25a control unit*
10. *Frequency switch for FuG 16y*
11. *Emergency bomb release lever (only bomber versions)*
12. *Connection box for FuG 16y*
13. *Frequency control for FuG 16z*
14. *Connections for helmet*
15. *Starter control switches*
16. *Coupling for pilots helmet leads*

Drawing from Ersatzteil-Liste Me 262 showing electrical connectios in the cockpit. Main switch board is shown and radio equipment behind the seat.

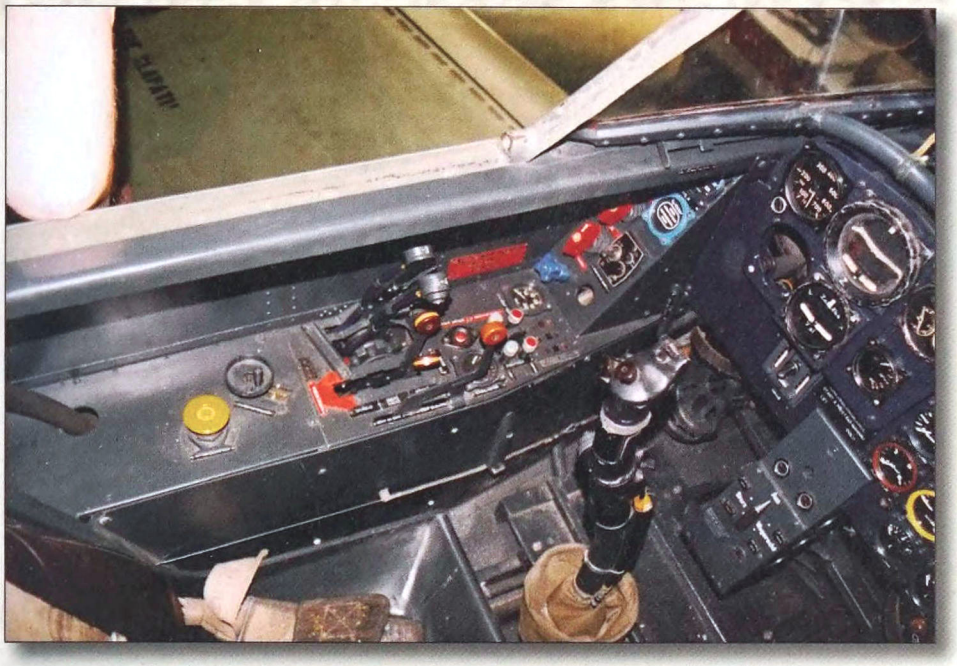




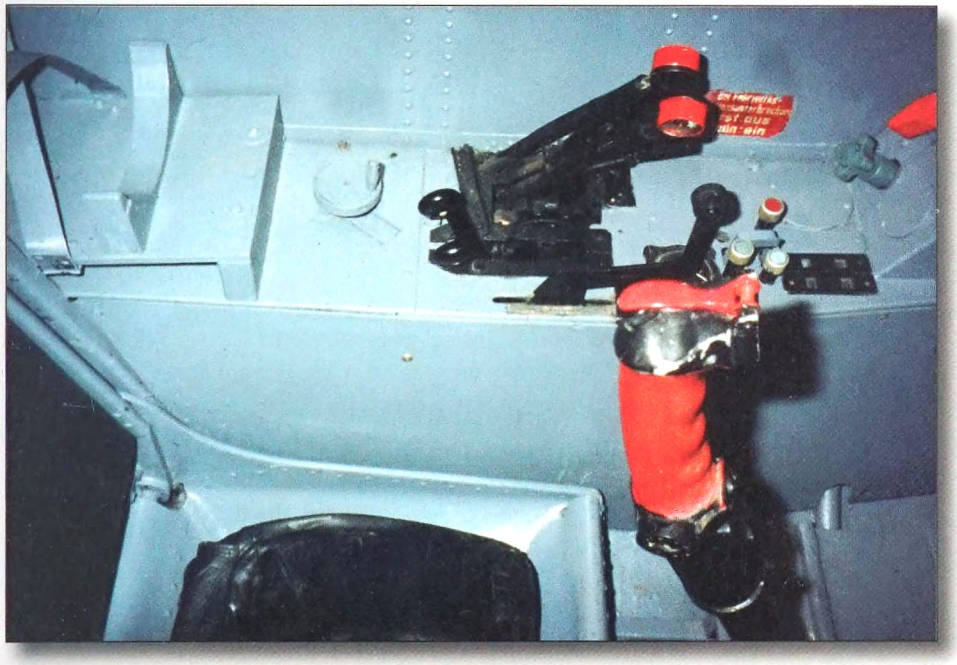
Port panel, Avia S-92.
(B. Kudlička coll.)
1. Windshield washing
2. Rudder trim wheel crank
3. Fuel throttles
4. Fuel lever detent
5. Gloves heating connectors
6. Fire safety cock lever
7. Breathing hose
8. Tailplane trim adjustment
9. Battery cut-off switch
10. Mounting
11. Tailplane trim indicator
12. Landing flap switch
13. Undercarriage switch
14. RATO release (when mounted)
15. Cockpit air pressure indicator
16. Port main undercarriage leg indicator
17. Front undercarriage leg indicator
18. Starboard main undercarriage leg indicator
19. Oxygen shutoff valve
20. Emergency landing flap control
21. Emergency undercarriage control
22. RATO starting box
23. Cockpit vent handle
24. Oxygen flow indicator
25. Oxygen pressure indicator



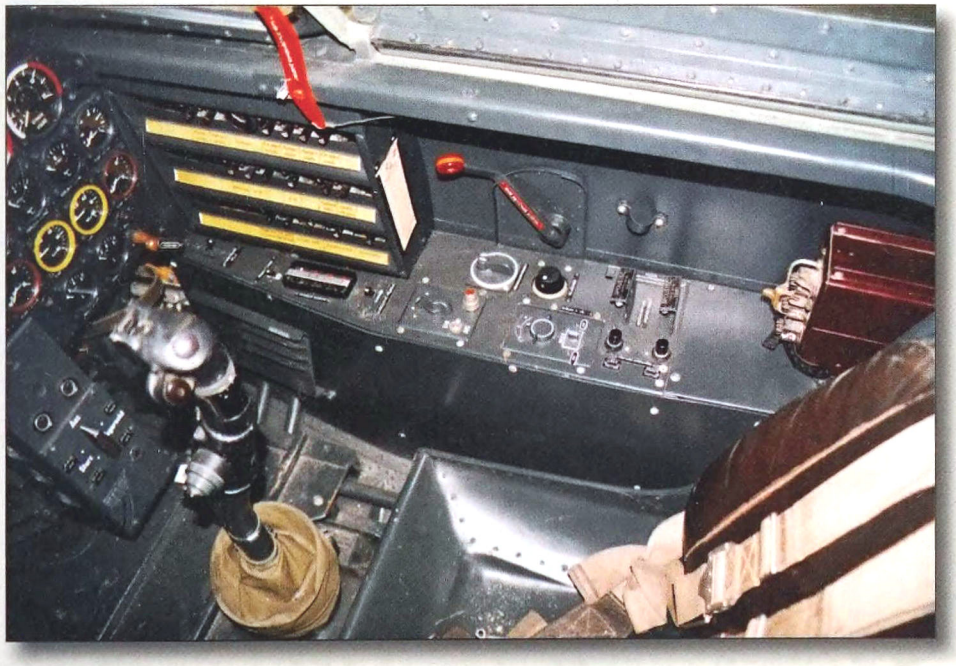
Above: *Details of the port additional panel. (Ersatzteil-Liste Me 262)*
1. Oxygen flow indicator;
2, 3, 4, 5 Screws;
5. Panel sheet.



Port side of the cockpit, details of the port side panel are visible. (R. Pęczkowski)



Details of the engines controls. Photo of the Czechoslovak built S-92. (R. Pęczkowski)



Starboard side of the cockpit. Starboard console is visible. Colours of Cosford's Me 262 in the early '90s were most probably original. (M. Bronkowski)

Cockpit pressure gauge used in later aircraft.

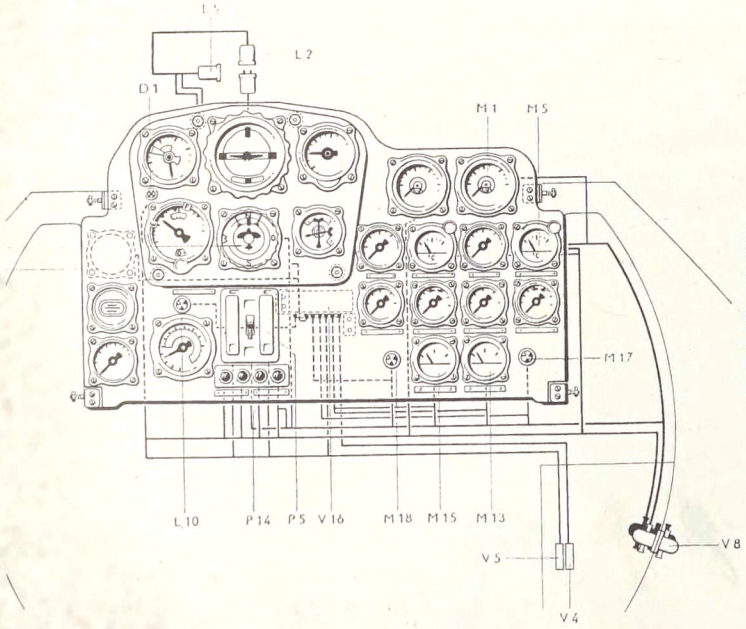
Above: *Me 262 A standard instrument panel in colour. The most common version is shown. Note that colours of the instruments in preserved aircraft are different in almost each plane. It is probably due to repainting during restorations. Also in preserved aircraft replacement instruments are used. Also during production of the Me 262 different versions of instruments were used. Alternative versions are shown on the right. It is also possible that warning Red and Yellow colours were painted by the mechanics to help pilots during flight.*
(All drawing by D. Karnas)

Alternative fuel temparature gauge.

Alternative fuel pressure gauge.

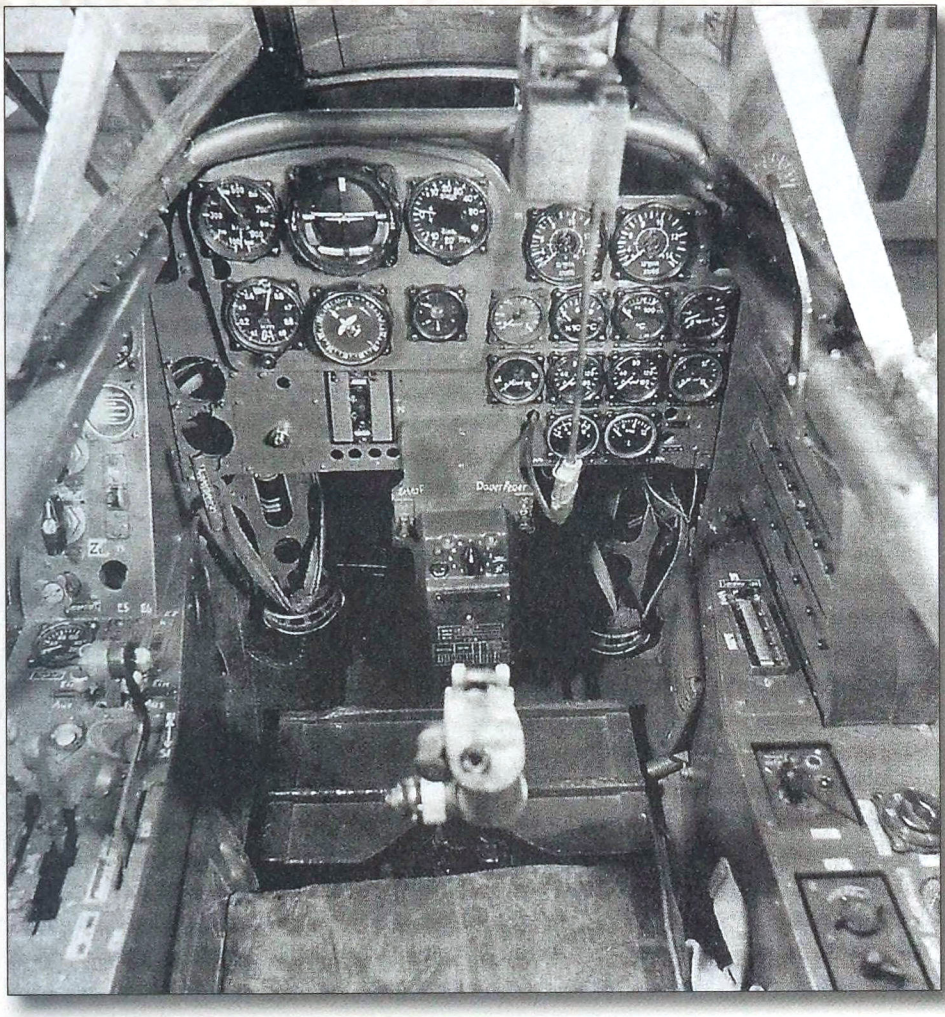
Alternative oil pressure gauge.

Alternative pressure gauge.

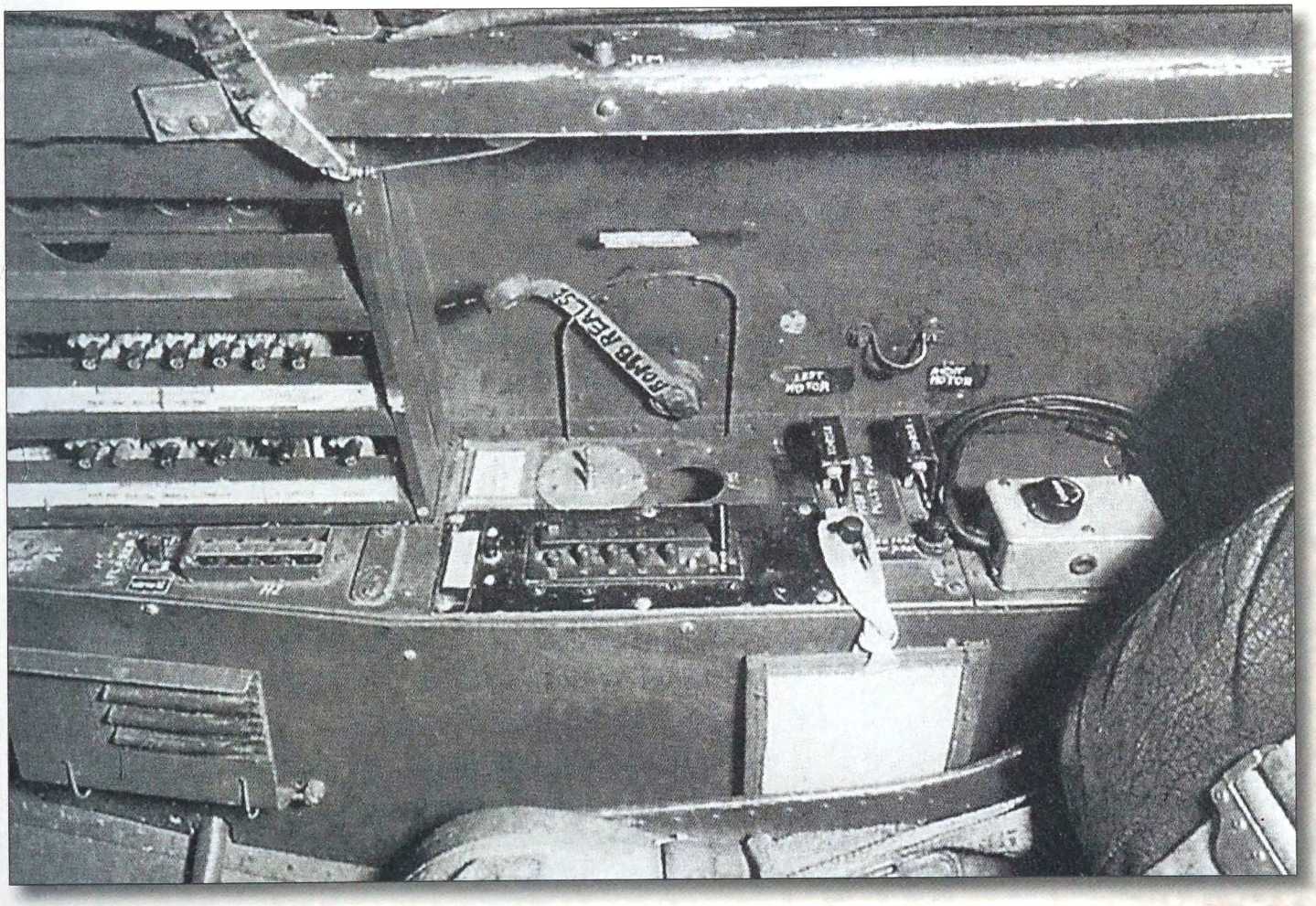


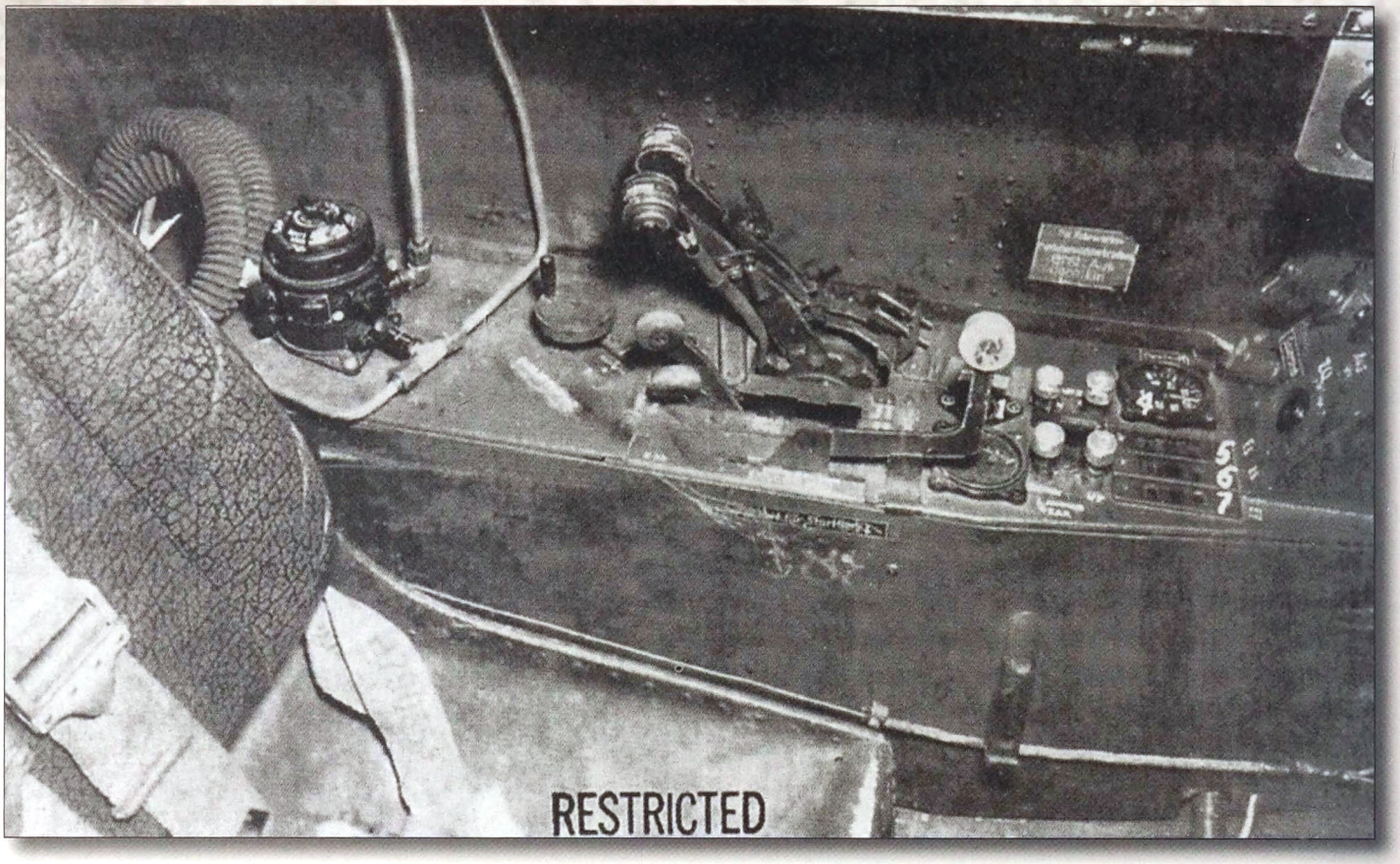
Explore interactive instrument panel here:
http://www.mmpbooks.biz/panel/me_262_panel.html

Left: *Instrument panel as shown in the Ersatzteil-Liste Me 262) publlished in 1944. Late production Me 262 A. Note the differences.*



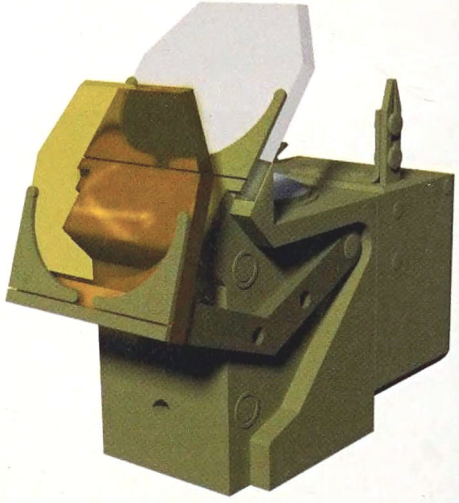
This page: Photos of the Me 262 A-1a captured by US troops. Aircraft was tested by US pilots. Note that some instruments are missing. (US National Archives)



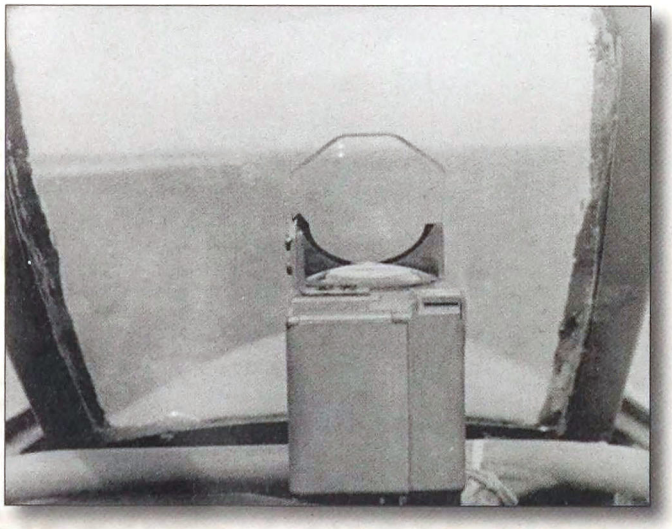


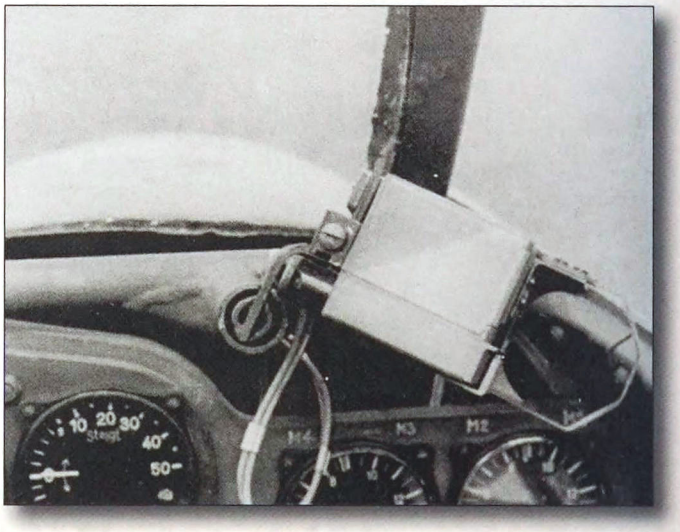
Above: Port console details. (US National Archives)

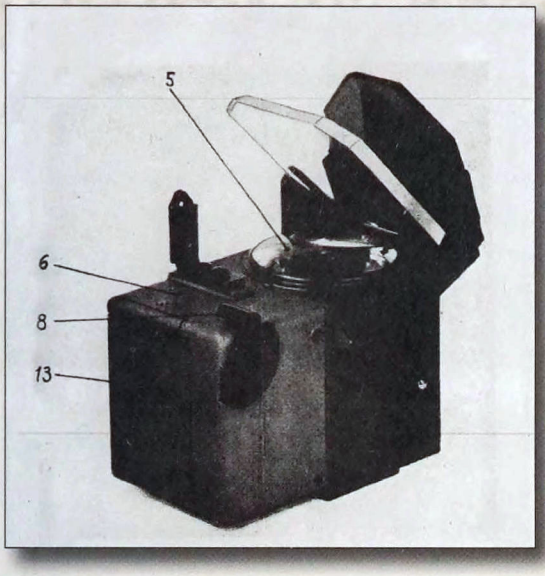
Right: 3D drawing of the Revi 16B gunsight. (Drawing by D. Grzywacz)

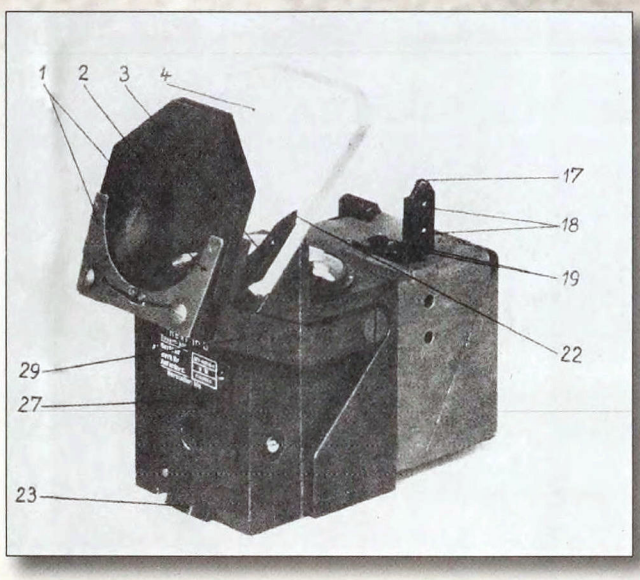


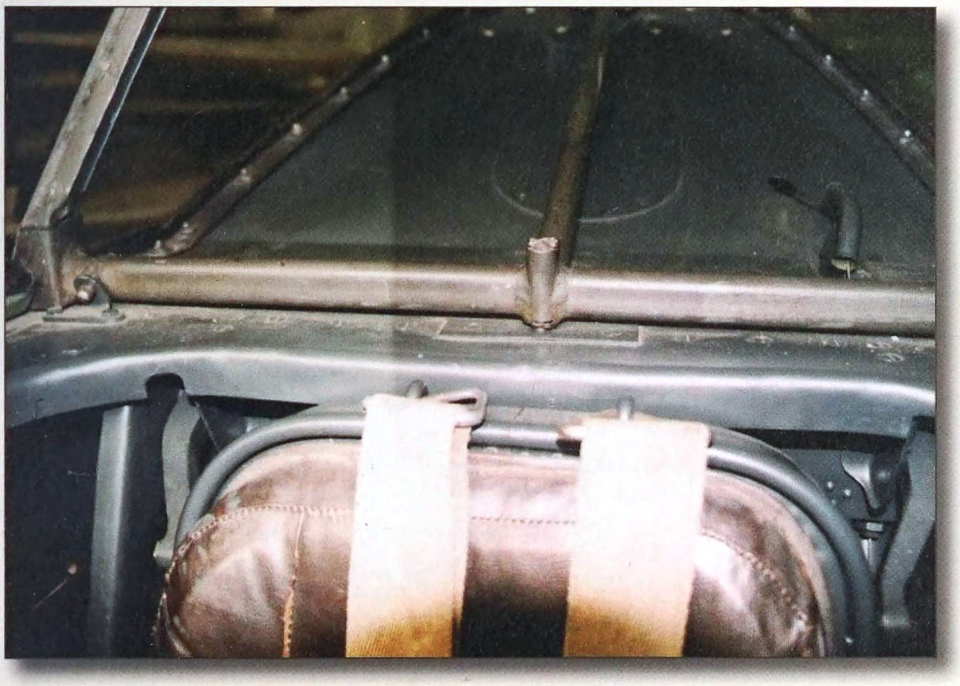
Below: Two photos of the Revi 16B gunsight in flight – firing, (left) and take-off, landing position (right photo). (Both US National Archives)





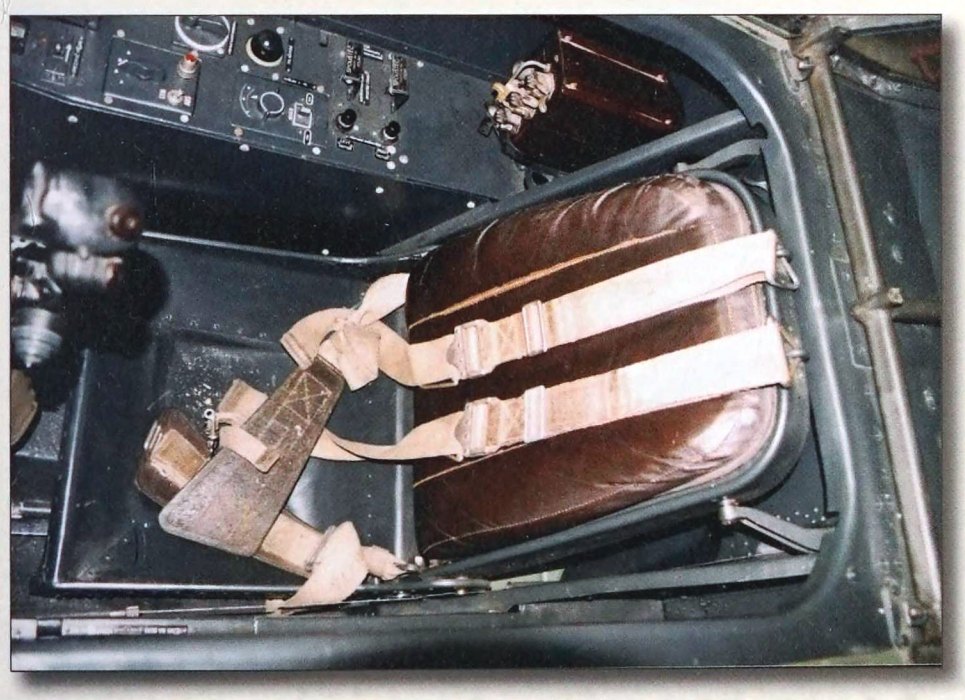






Top photos: *Revi 16B gunsight – photos from Revi Technical Manual*

1. *Coloured glass holder*
2. *Coloured glass*
3. *Reflex glass mount*
4. *Reflex glass*
5. *Projector lenses*
6. *Lighting housing*
13. *Lighting housing cover*
17. *Backsight*
18. *Stop screws – height adjustement*
19. *Stop screws – horizontal adjustement*
22. *Grain*
23. *Footplate*
27. *Optics housing*
29. *Shift lever for colour glass.*

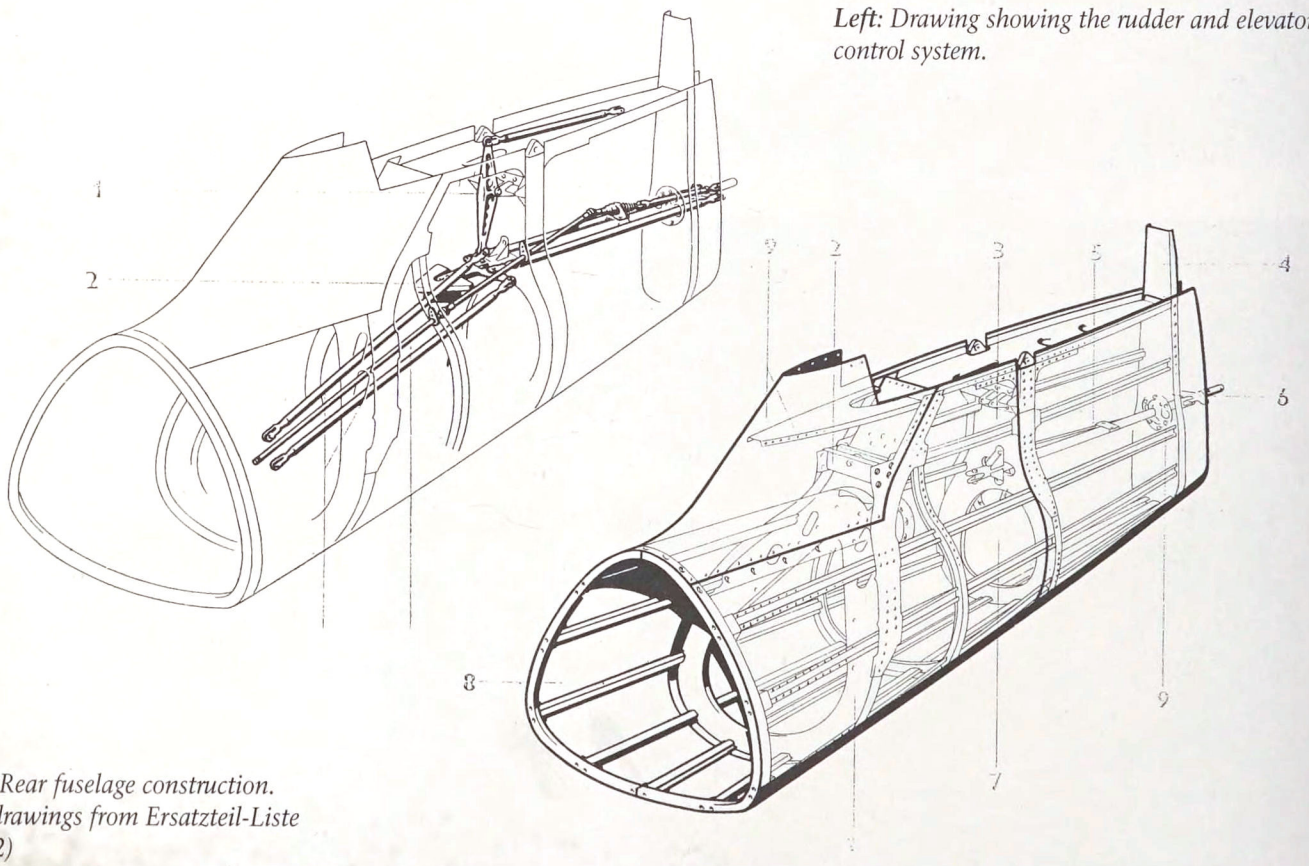


Two photos of the pilot's seat and seat-belts. Note that in the dorsal spine is the filler cap for the rear 900 liter fuel tank, visible in the upper photo.
(Both R. Pęczkowski)

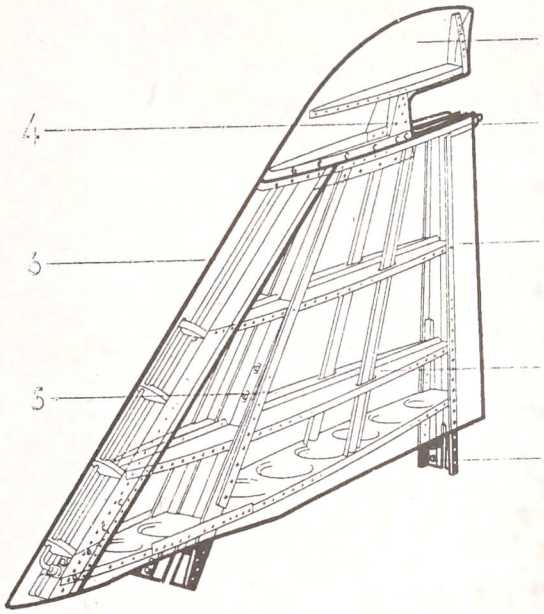
Tail

Above: Port side of the Me 262 tail. (R. Pęczkowski)

Left: Drawing showing the rudder and elevator control system.



Right: Rear fuselage construction. (Both drawings from Ersatzteil-Liste Me 262)



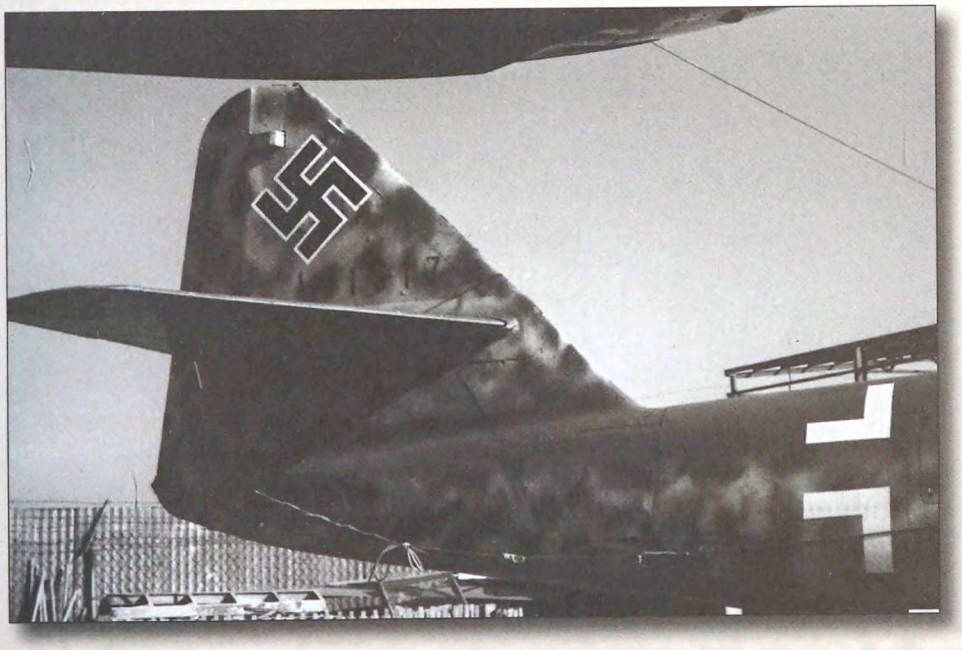
Above, right: *Rudder, tip, from the right. (A. Lochte)*

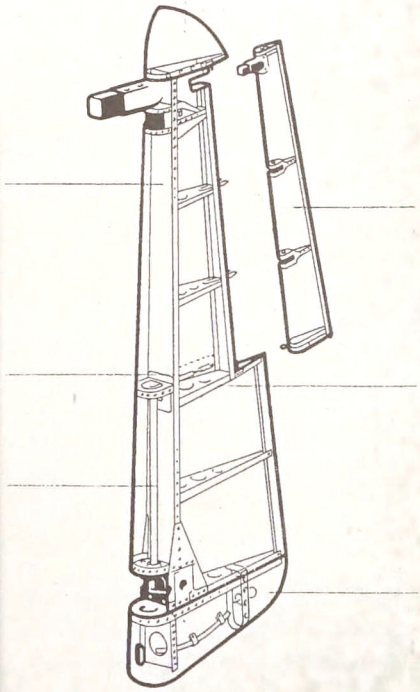
Above, left: *Details of the S-92 rudder. Rudder horn ballance is visible. (R. Pęczkowski)*

Right: *Fin structure drawing.*

Bottom, right: *Rudder and rudder trim tab structure. (Both drawings from Ersatzteil-Liste Me 262)*

Bottom, left: *Starboard side of the tail and rear fuselage. (A. Lochte)*



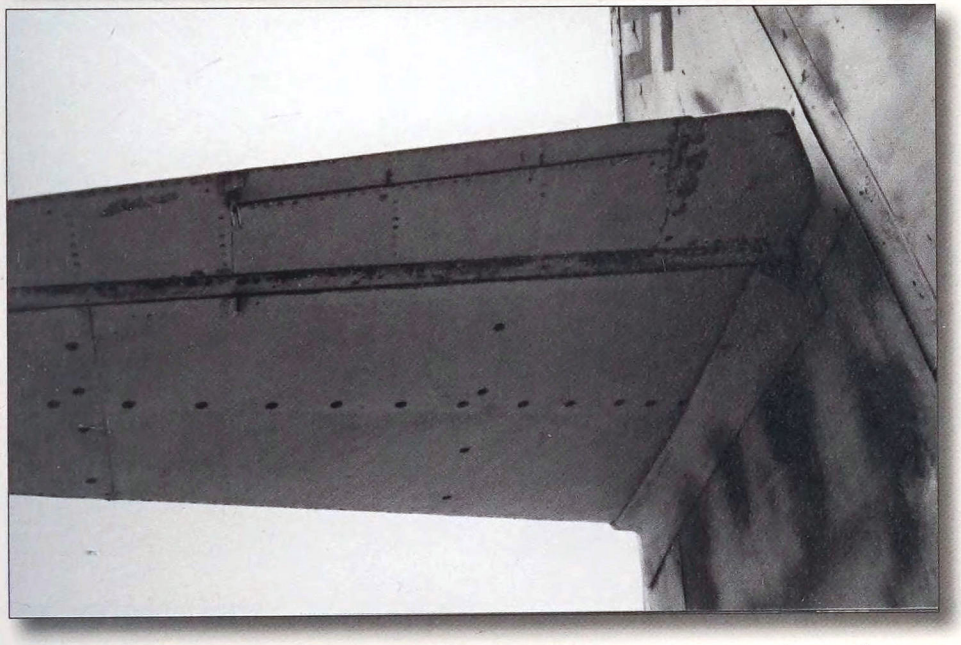


Above: Details of the Me 262 A-2a rudder. (R. Wallsgrove)

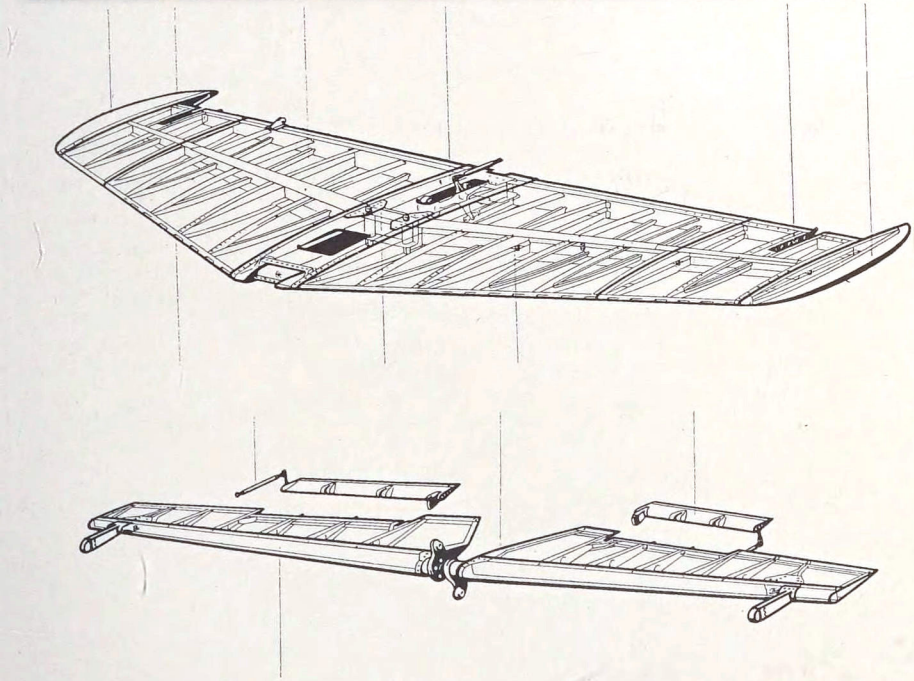
Right: Rudder trim tab and elevator trim tab are shown on S-92. (R. Pęczkowski)

Lower, rear part of the tail, starboard side. Access panels (control cable access) are visible. Note tail navigation light. (A. Lochte)

Underside of the port tailplane on S-92. Note the elevator horn balance. (R. Pęczkowski)



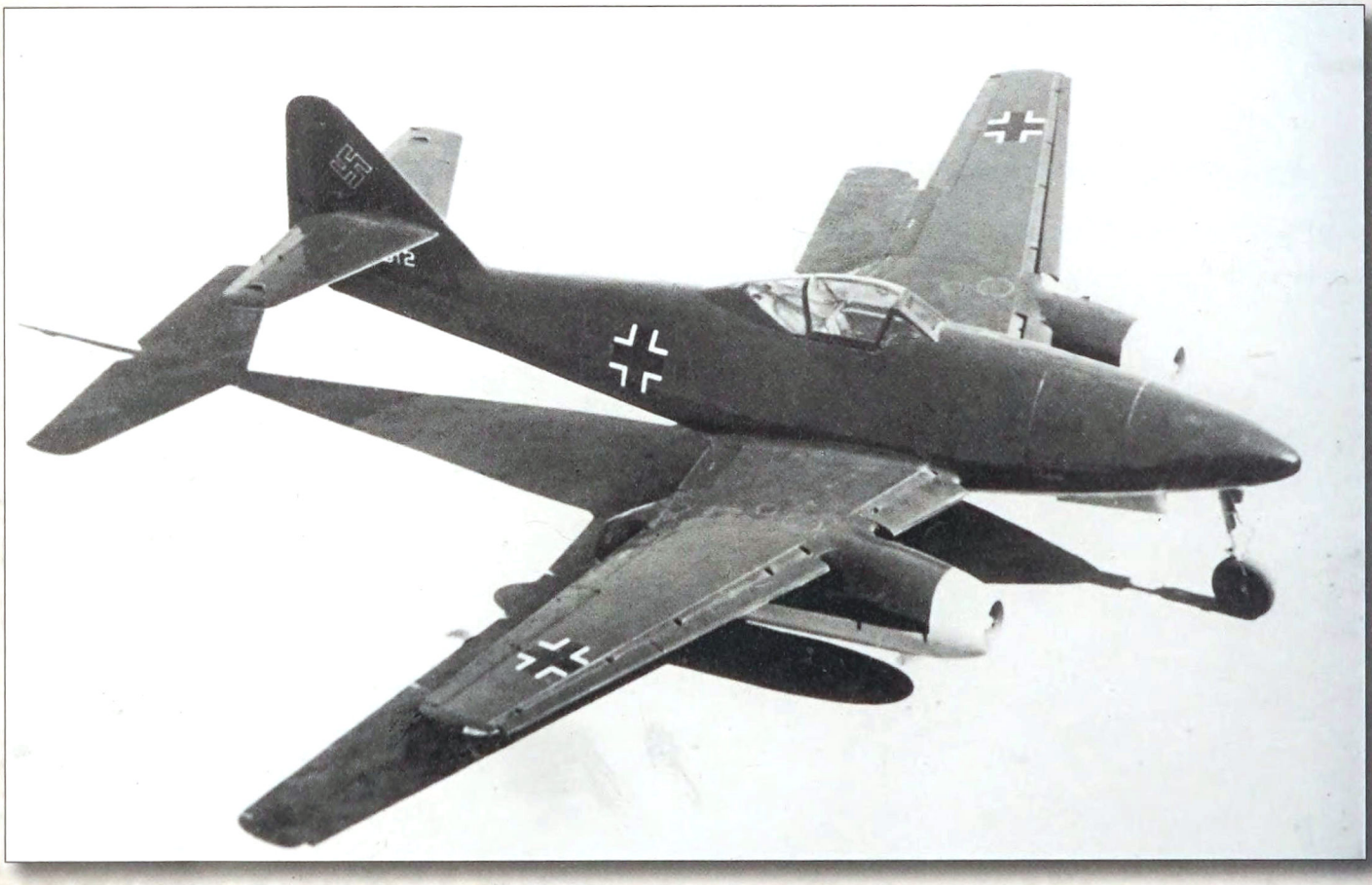
Underside of the port tailplane. Elevator trim tab is visible. (A. Lochte)

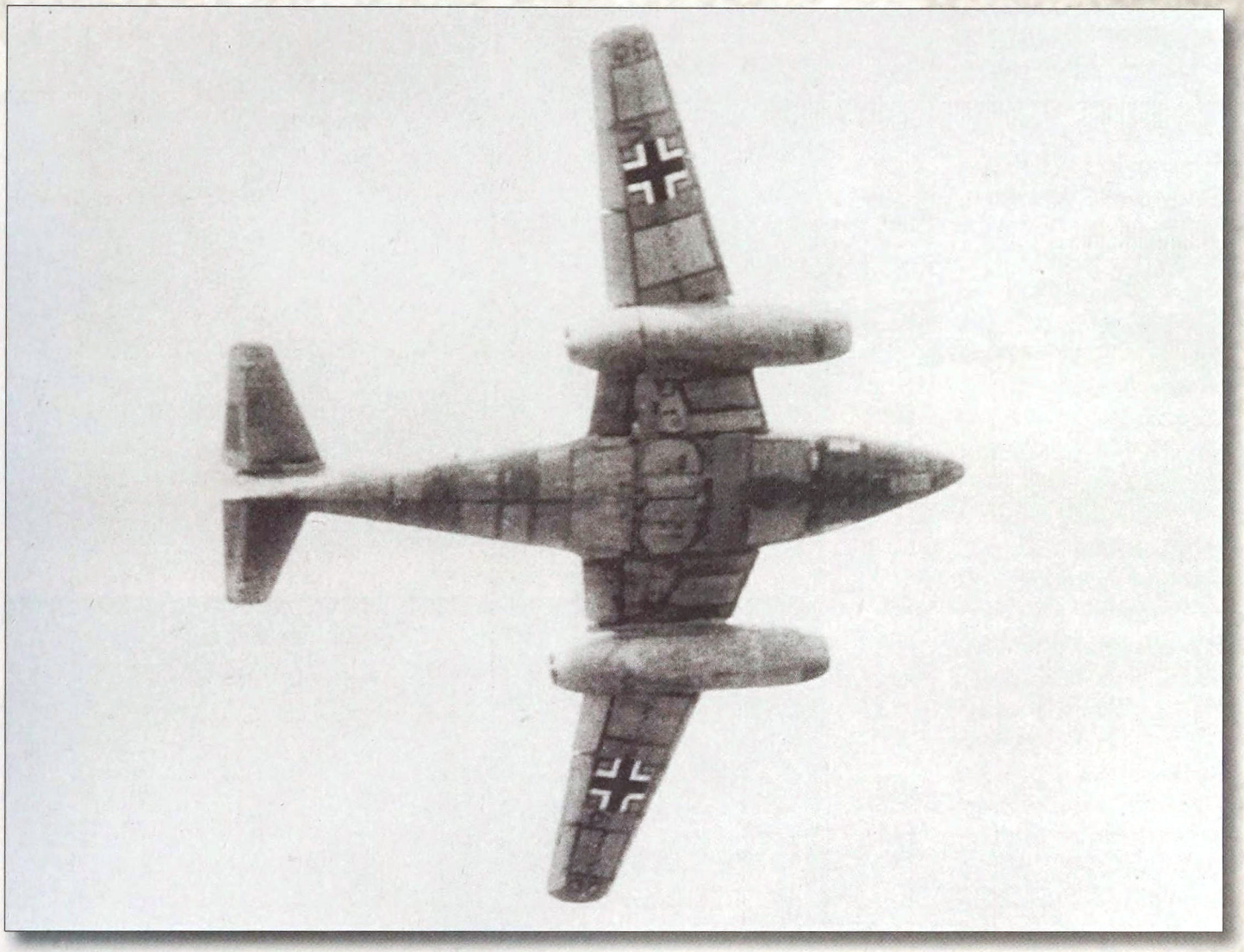


Two drawings from Ersatzteil-Liste Me 262 showing tailplane (upper) and elevators (lower drawing) construction.

Above: Me 262 preserved in Hendon showing wings with flaps in landing position. (D. Karnas)

Below: Me 262 tested in USA with leading edge slats in open position. Slats were divided in three sections with two attachments for each section. (A. Lochte coll.)

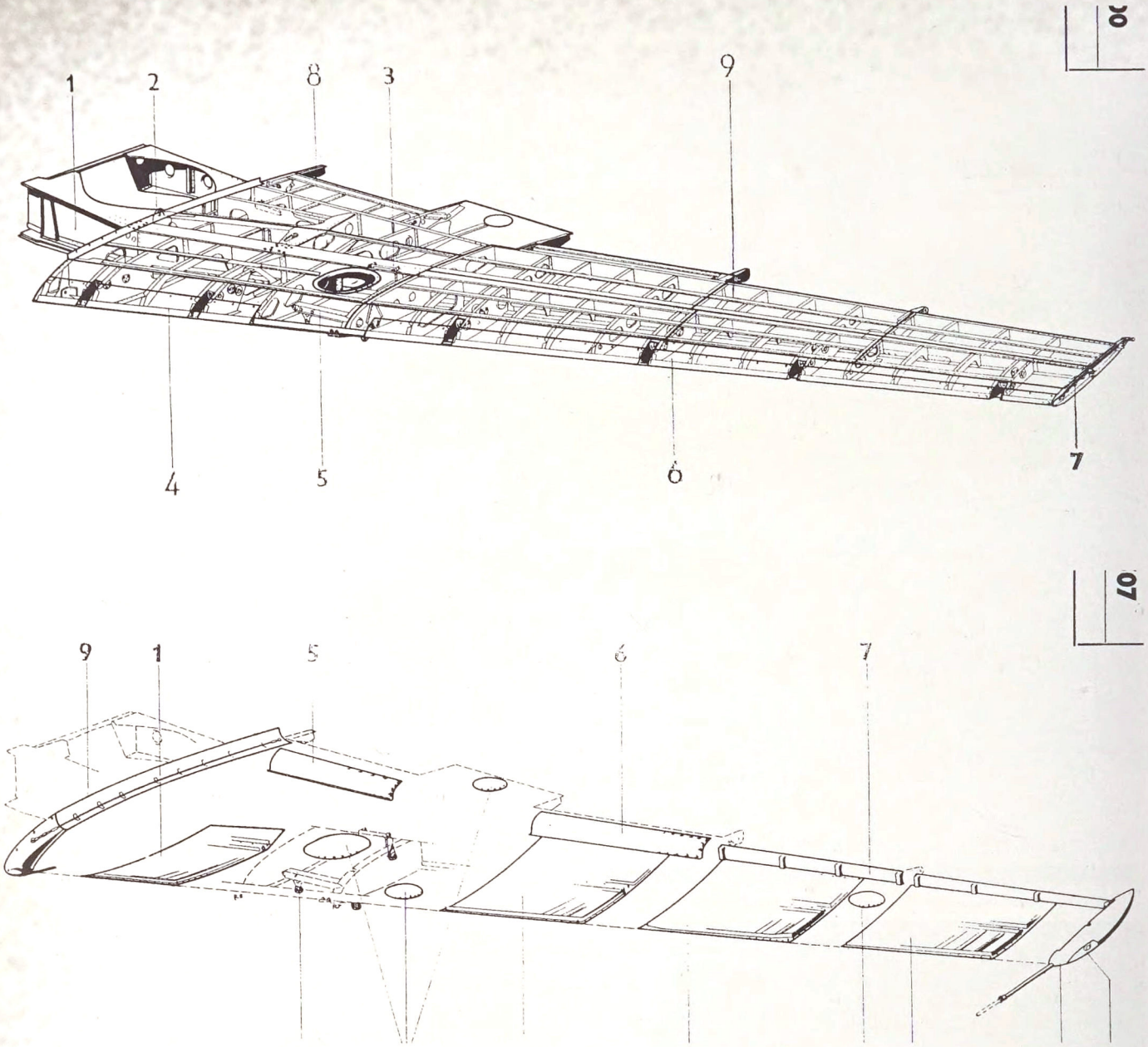




Above: *Me 262 tested in USA in flight showing undersurfaces. Aircraft is unpainted so all panel lines are visible. (US National Archives)*

Right: *Uppersurfaces of the port wing. Aircraft preserved in Cosford, early 90s.*

Bottom: *Port wing, flaps in flight position. Engine – wing intersection and fairings are visible. (Both R.. Pęczkowski)*

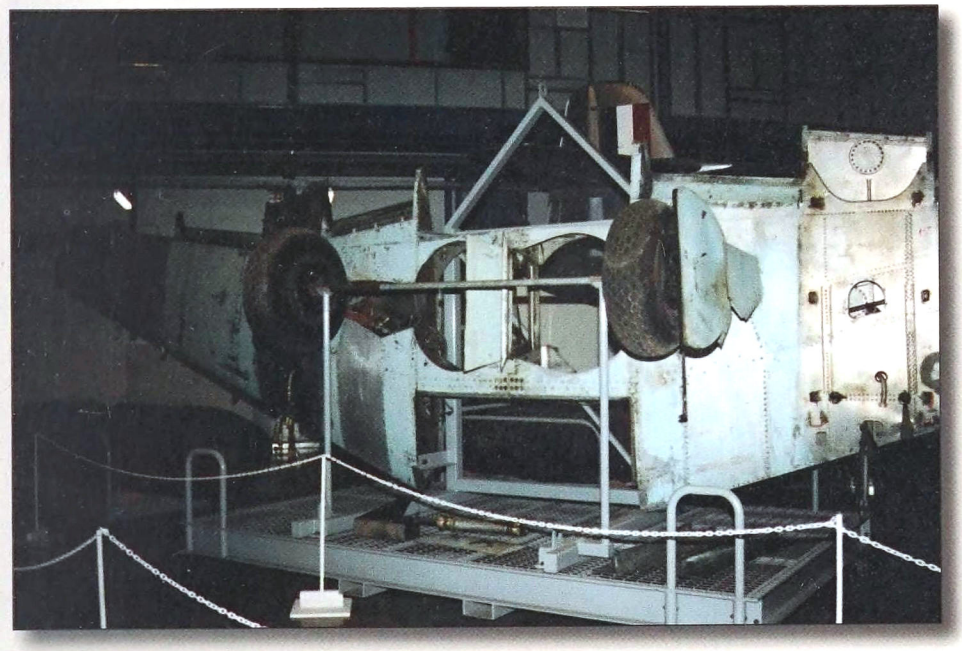


Top: Port wing structure.

Above: Removable panels of the port wing. (Both drawings from Ersatzteil-Liste Me 262)

Port wing, just above the engine. Slats in closed position. Access panel to the engine mount is visible. (R. Pęczkowski)

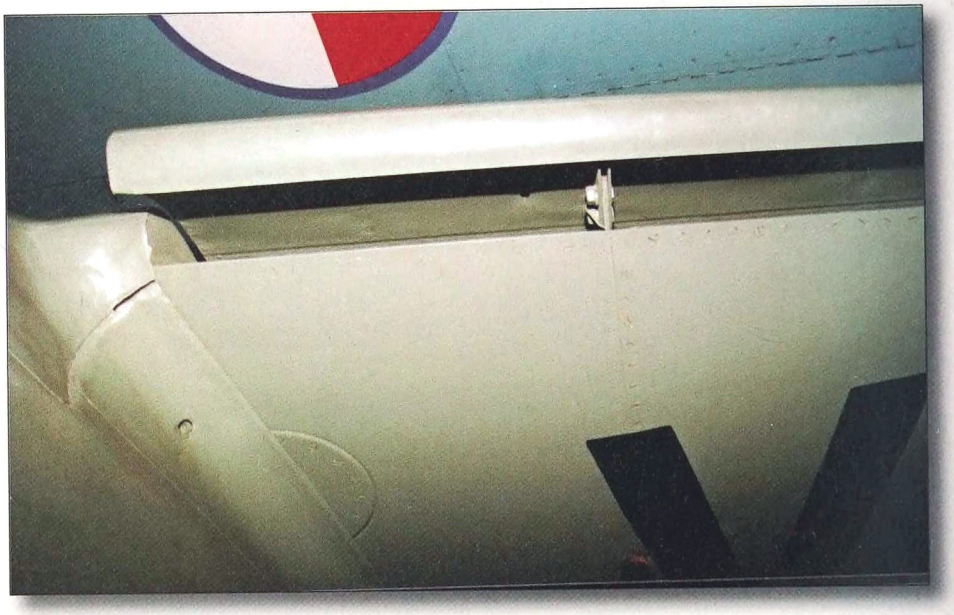
Upperside of the starboard wing of the Me 262 A-2. (R. Wallsgrove)



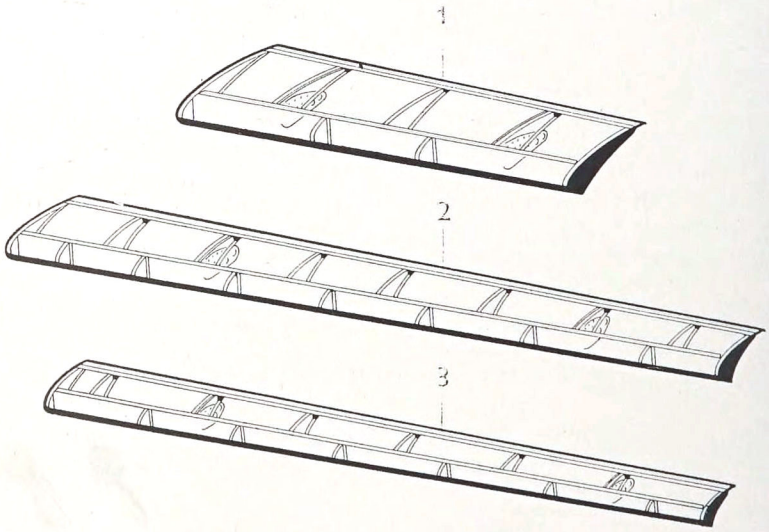
Underside of the wings with undercarriage still mounted. (R. Wallsgrove)

Details of the flap and aileron, port wing. (R. Pęczkowski)

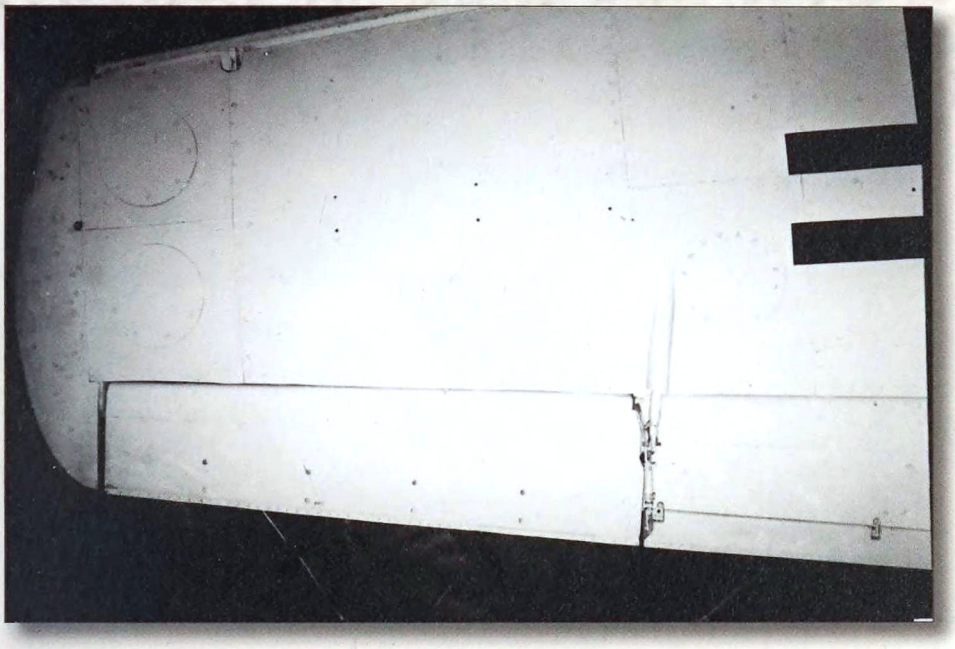
Underside of the port wing close to the engine, slats in closed position. "Hier aufbocken", *(Jack is here) stencil is visible. (R. Pęczkowski)*



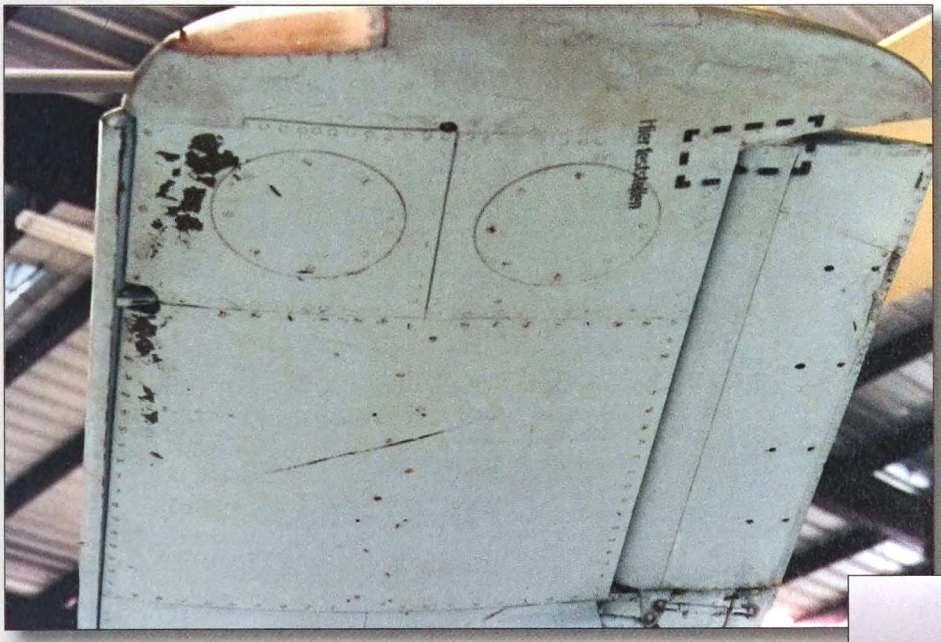
Slats in open position, underside on S-92. (R. Pęczkowski)



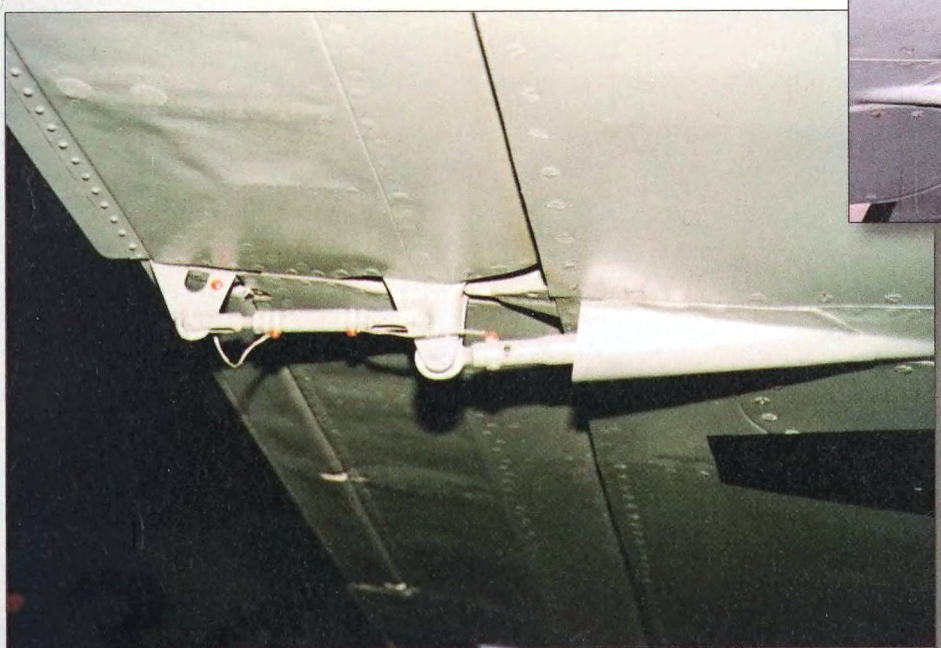
Drawing from Ersatzteil-Liste Me 262 of the slats – three sections.
1. inner section
2. middle section
3. outer section



Underside of the aileron. Two circular access panels are visible. (R. Pęczkowski)



Wing tip and aileron, port side. Navigation light is visible. (R. Pęczkowski)



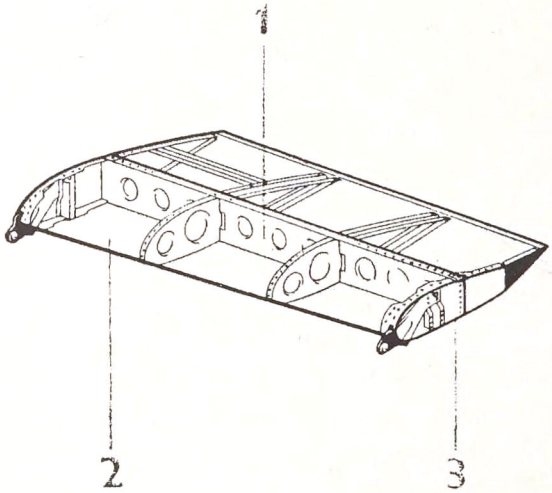
Two photos of the trim tab control rod. Port and starboards controls are shown. (Both R. Pęczkowski)

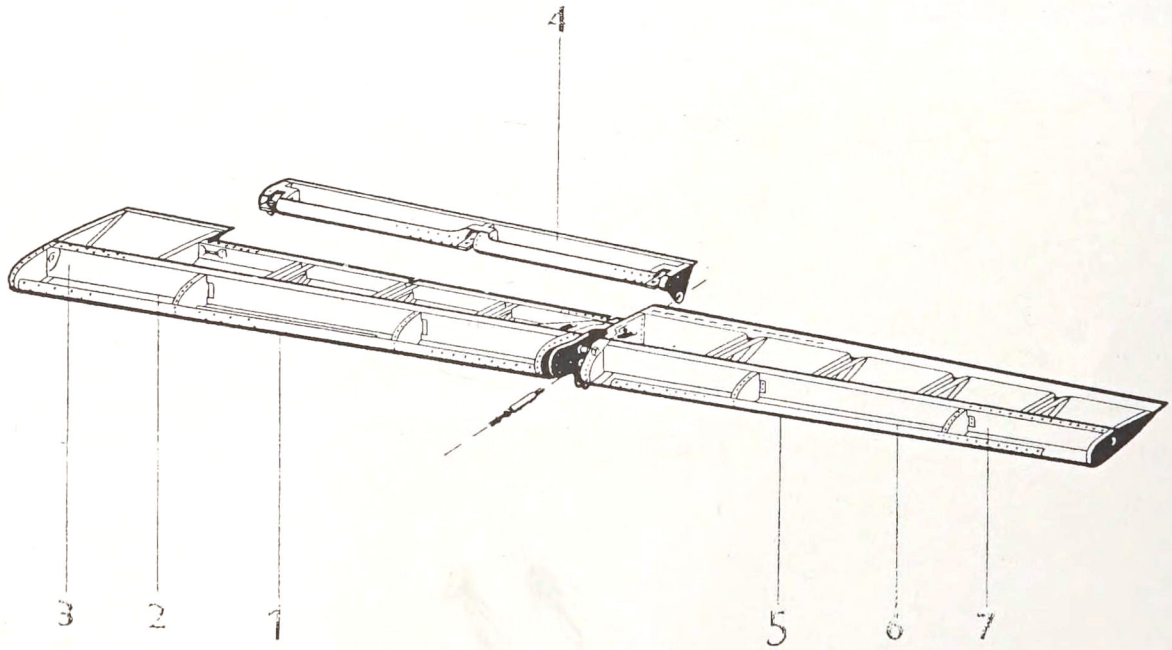
Underside of the port wing, middle section.
(R. Pęczkowski)

***Right**: Landing flap construction.*

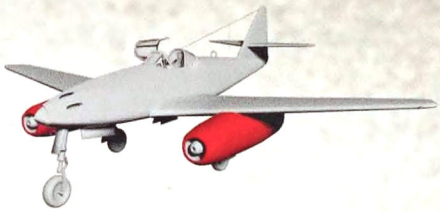
***Bottom**: Aileron and trim tab construction.*

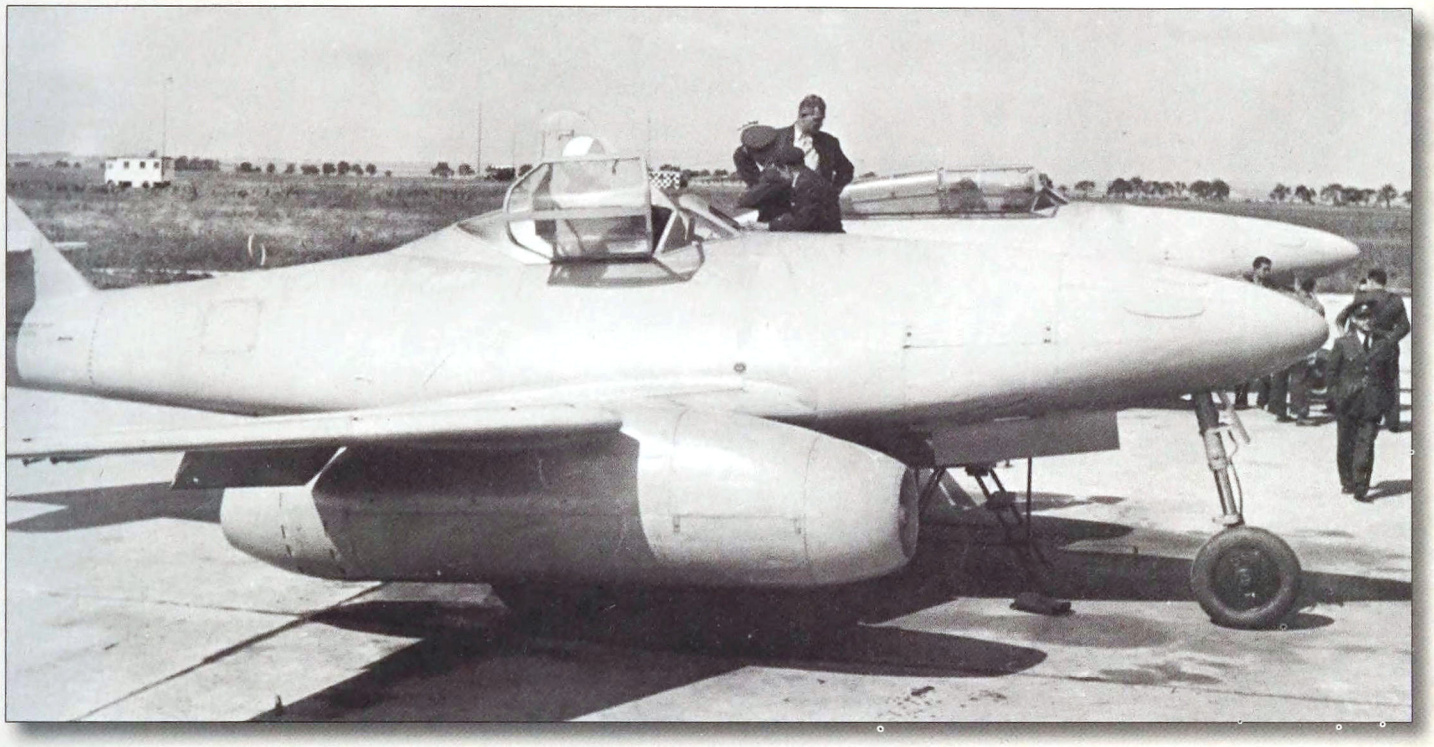
(Both drawings from Ersatzteil-Liste Me 262)





Engines



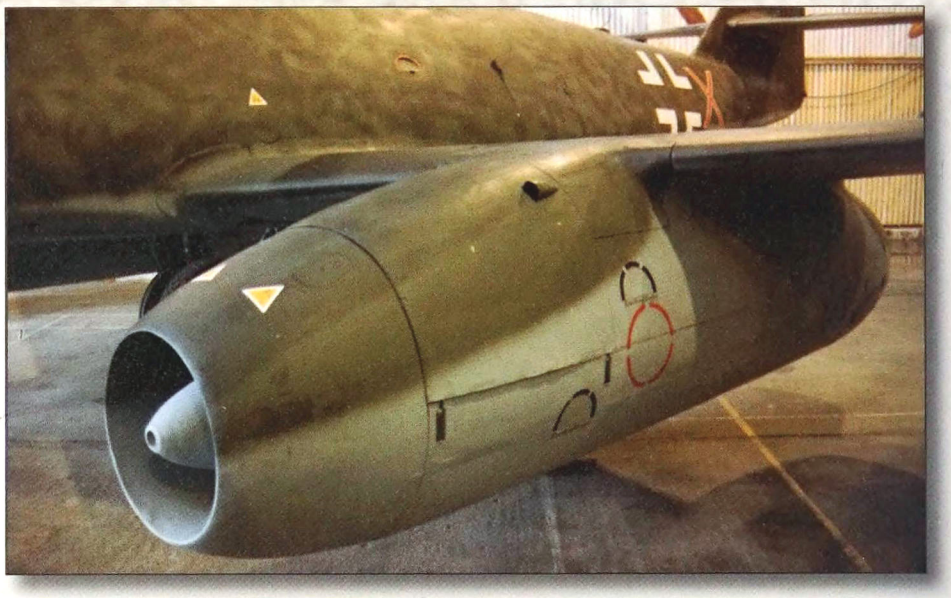


Above: Starboard engine nacelle, outside view. Czechoslovak built aircraft. (B. Kudlička coll.)

Right: Port engine nacelle, upper view. (A. Juszczak)

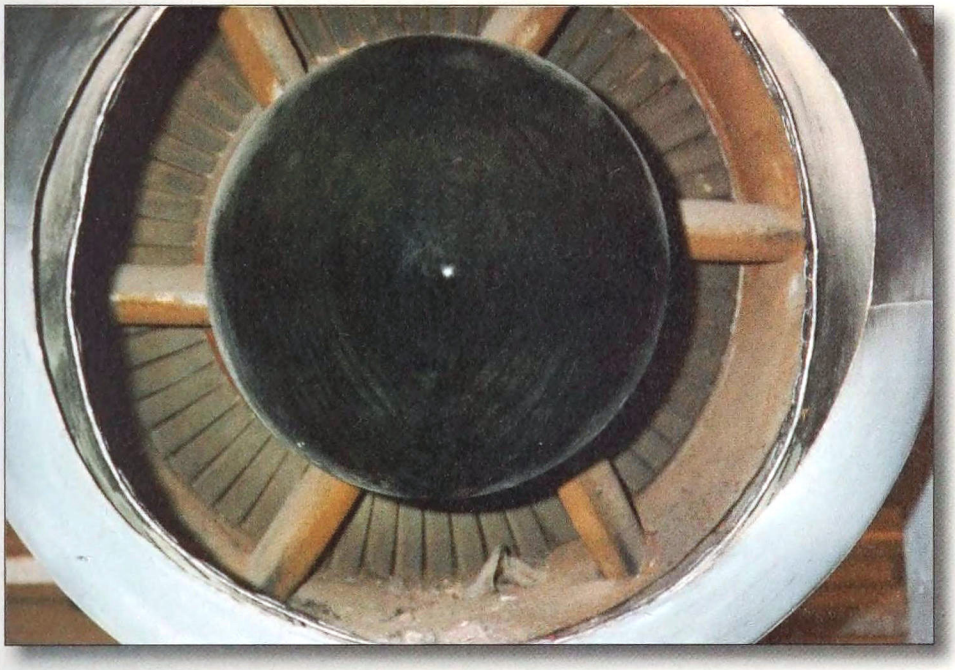
Below: Fairing covers the Riedel-Anlasser RBA-S10 starter. Compressor is also visible. (R. Pęczkowski)

Port engine nacelle. Air scoop for the starter is visible on the nacelle top. (M. Bronkowski)



Starboard engine, outside, front view. Access panels are visible. (A. Juszczak)

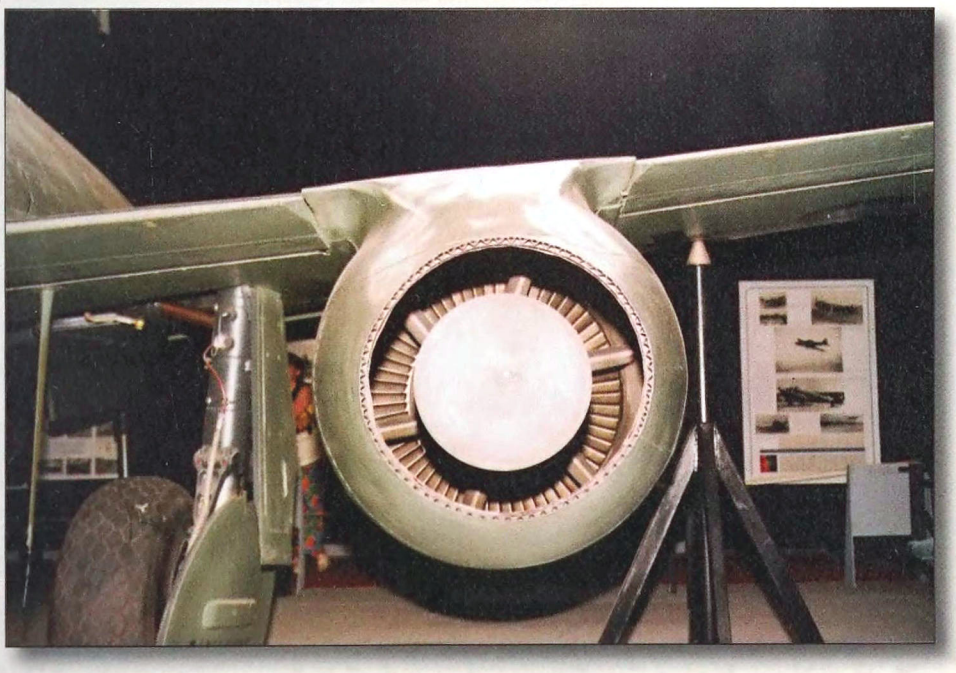
Rear view of the nacelle, complex shape is visible. (A. Juszczak)



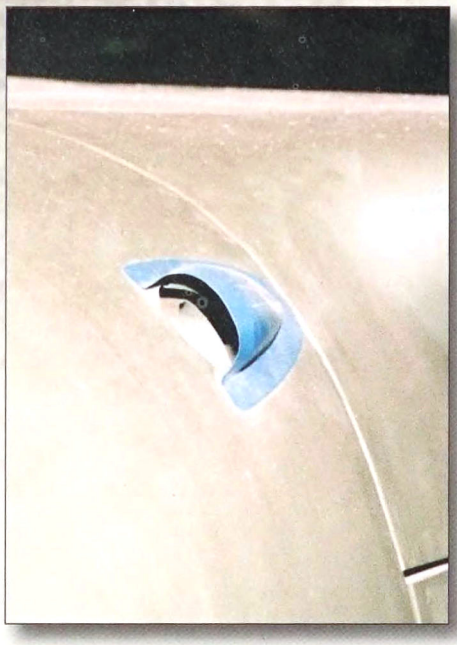
Top, left: Rear part of the nacelle. Cooling vents are visible. (R. Pęczkowski)

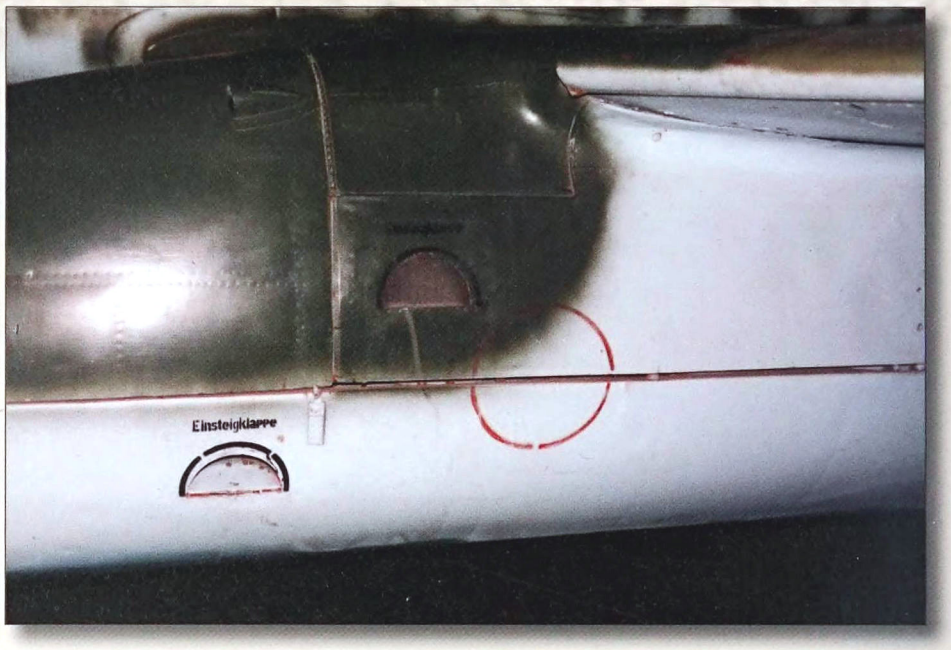
Top, above: Front view of the engine nacelle. (B. Bronkowski)

Left: Engine exhaust nozzle. Black cone is movable. Turbine is also visible. (R. Pęczkowski)



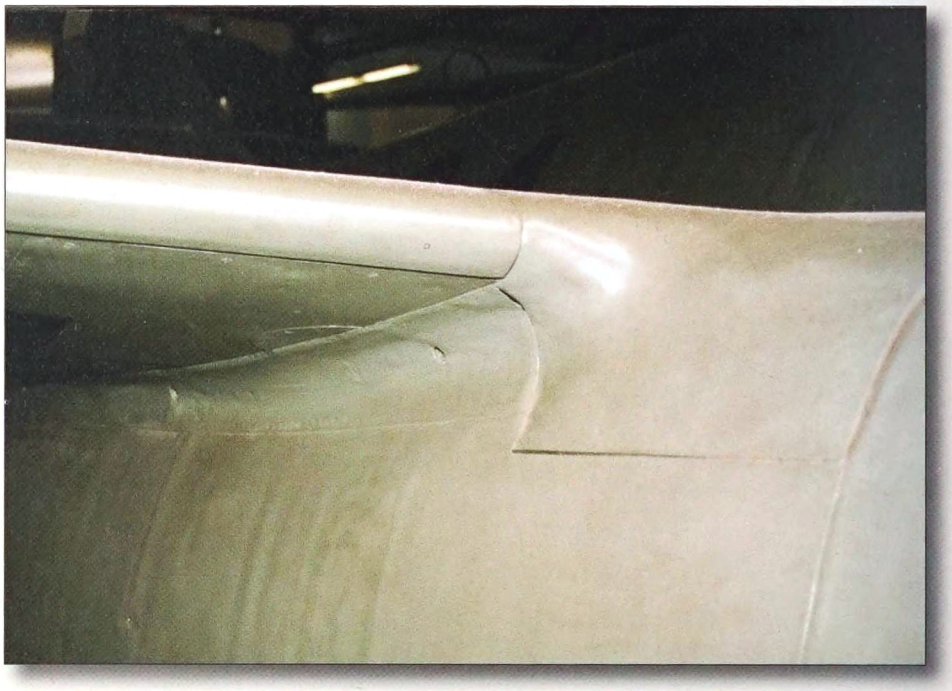
Rear view of the starboard engine of the S-92. (R. Pęczkowski)





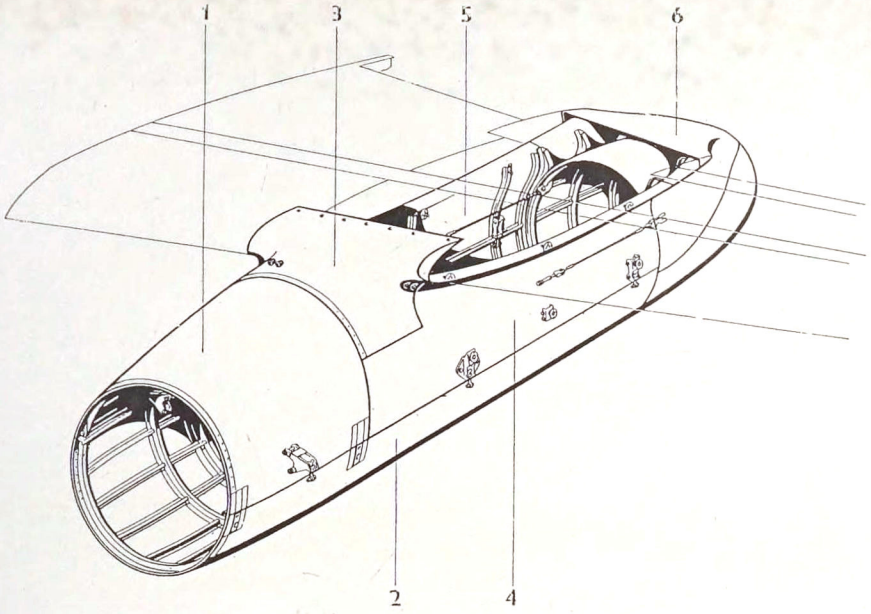
Top, left: Detail shot of the air scoop for the starter. (R. Pęczkowski)

Top, right: Port engine, outer side. Foot steps and stencils are shown. (M. Bronkowski)



Right: Engine nacelle – wing front intersection. (R. Pęczkowski)

Rear view of the nacelle – wing intersection. Note the complex shape. (R. Pęczkowski)

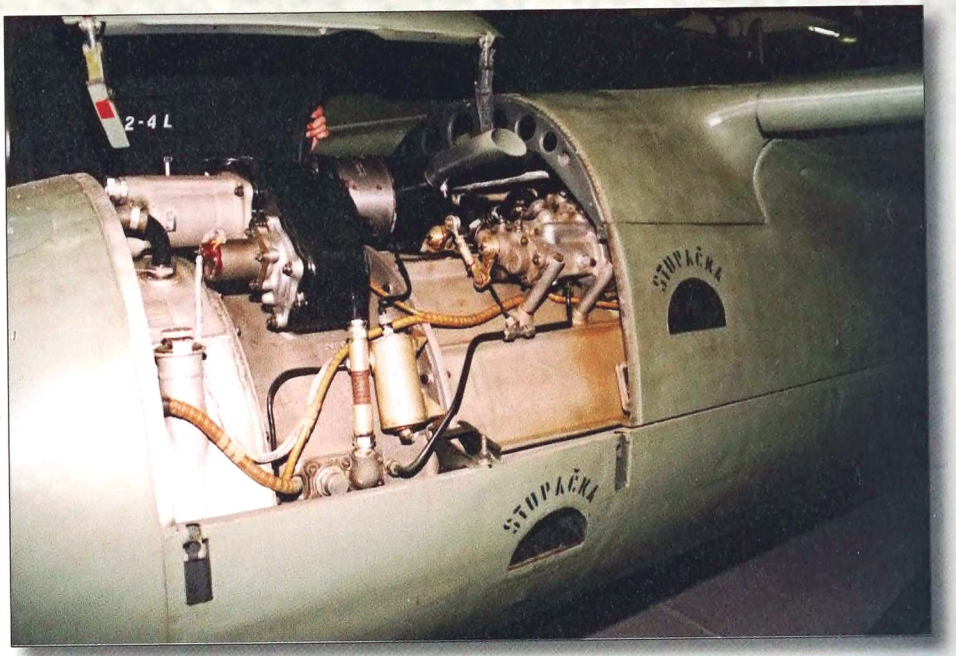


Drawing from Ersatzteil-Liste Me 262 showing nacelle's panels.

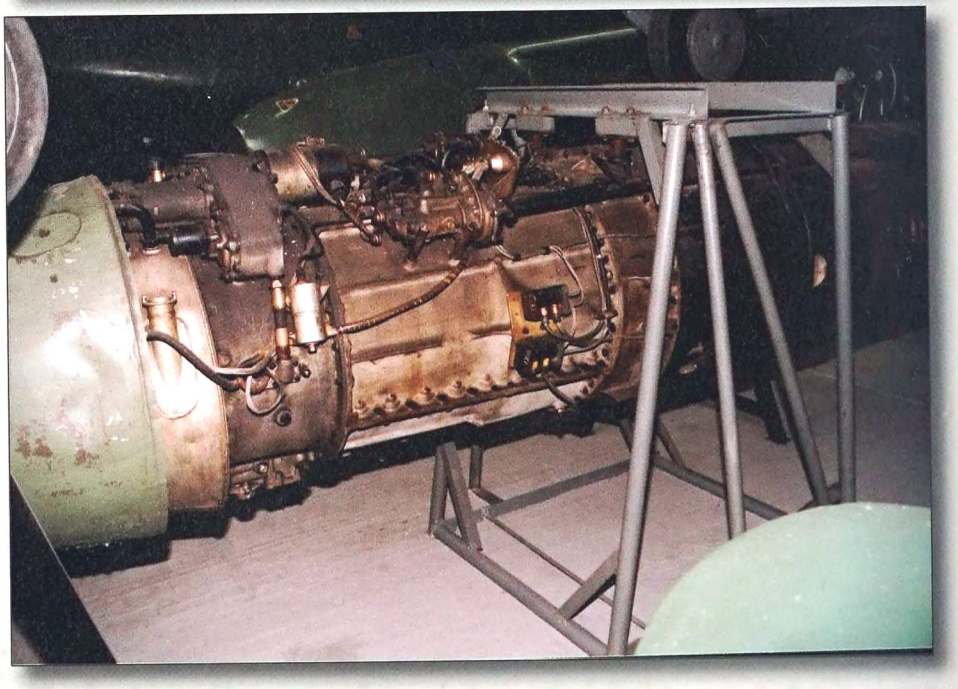
Port engine nacelle, side view. (R. Pęczkowski)

Front part of the engine nacelle. (A. Lochte)

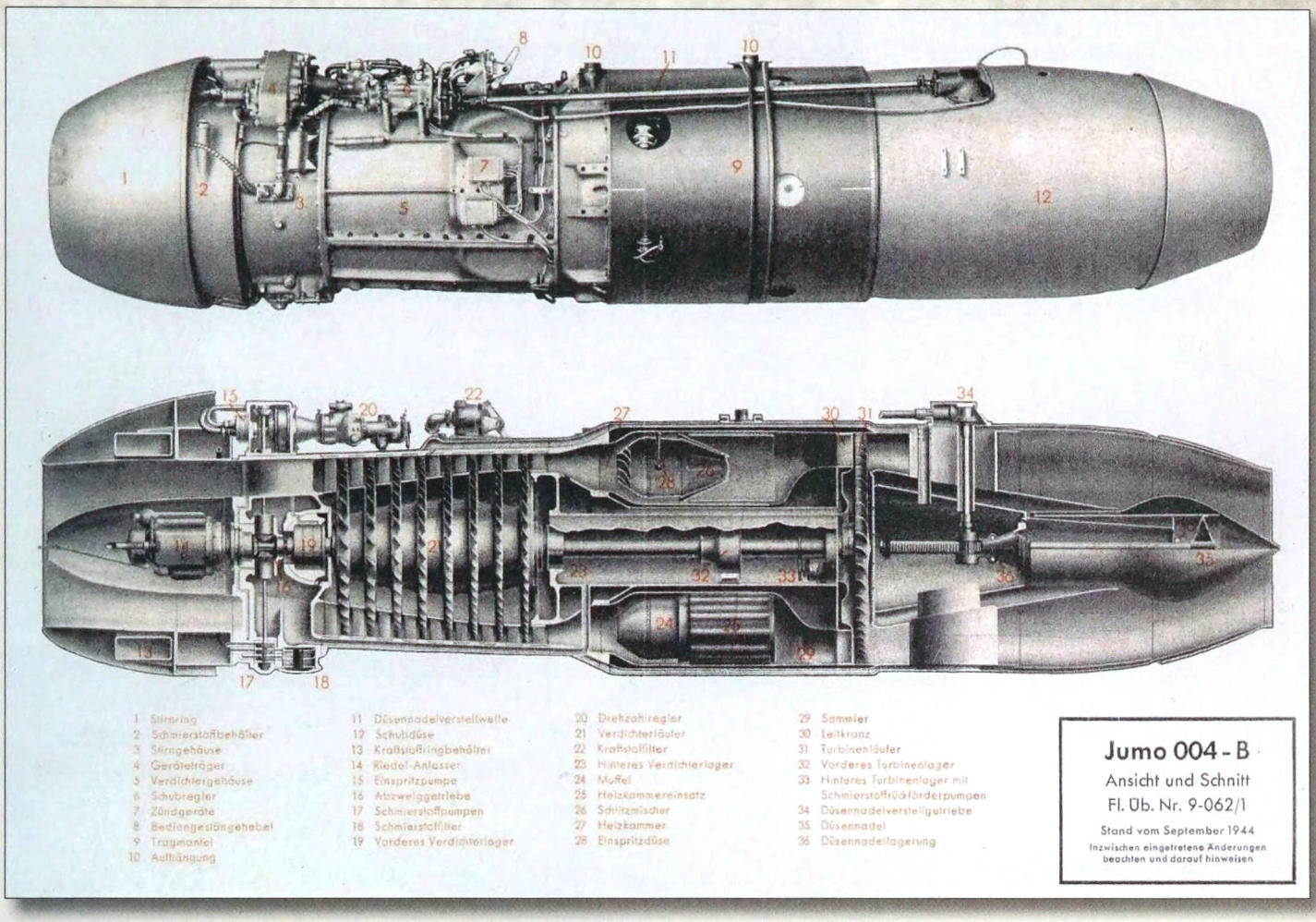
Photo of the S-92 showing panel in open position. Jumo 004B agregates are visible.



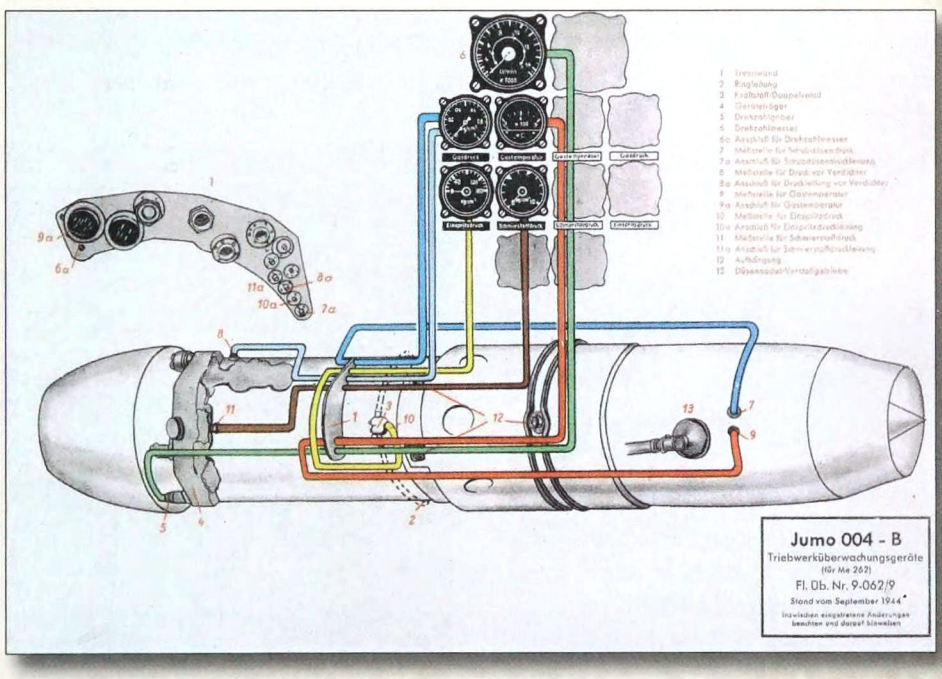
Inner details of one of the engin.



Jumo 004B with covers removed. (All photos R. Pęczkowski)

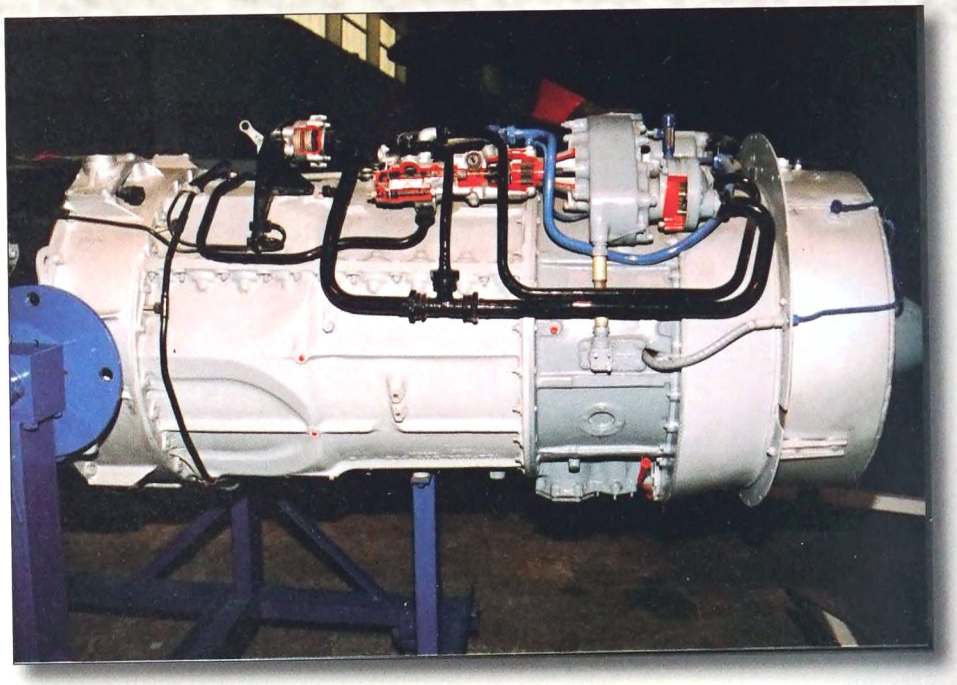


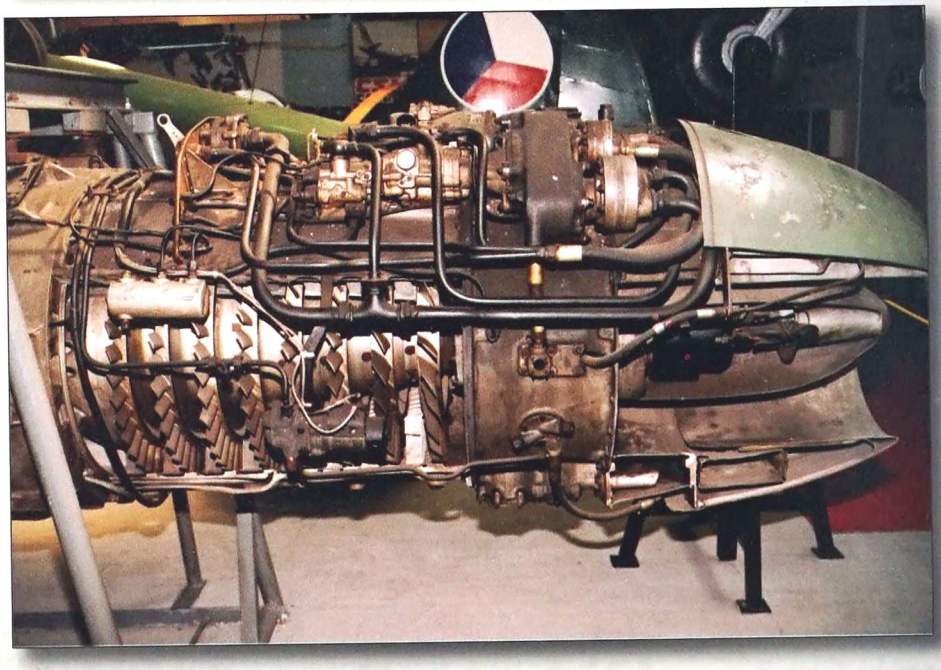
Above: *Jumo 004B details. Drawing from Jumo 004B Handbuch.*
1. Fairing; 2. Lubricant reservoir; 3. Face housing; 4. Equipment rack; 5. Compressor housing; 6. Throttle; 7. Ignitors; 8. Rod lever; 9. supporting casing; 10. Suspension; 11. Adjustable nozzle needle shaft; 12. combustion chamber hausing – exhaust nozzle; 13. Fuel ring input; 14. Riedel-Anlasser starter; 15. Injection pump; 16. Drop box; 17. Lubrication pump; 18. Lubrication filter; 19. Front comperssion bearing; 20. Speed controller; 21. Compressor rotors; 22. Fuel filter; 23. Rear comperssion bearing; 24. Muffler; 25. combustion chamber; 26. Fuel mixer; 27. Combustion chamber; 28. Fuel injection nozzle; 29. Unburn fuel collector; 30. Nozzle ring; 31. Turbine rotor; 32. Front turbine bearing; 33. Rear turbine bearing with lubrifivant pump; 34. Nozzle cone adjusting; 25. Nozzle cone; 36. Nozzle cone pivot.



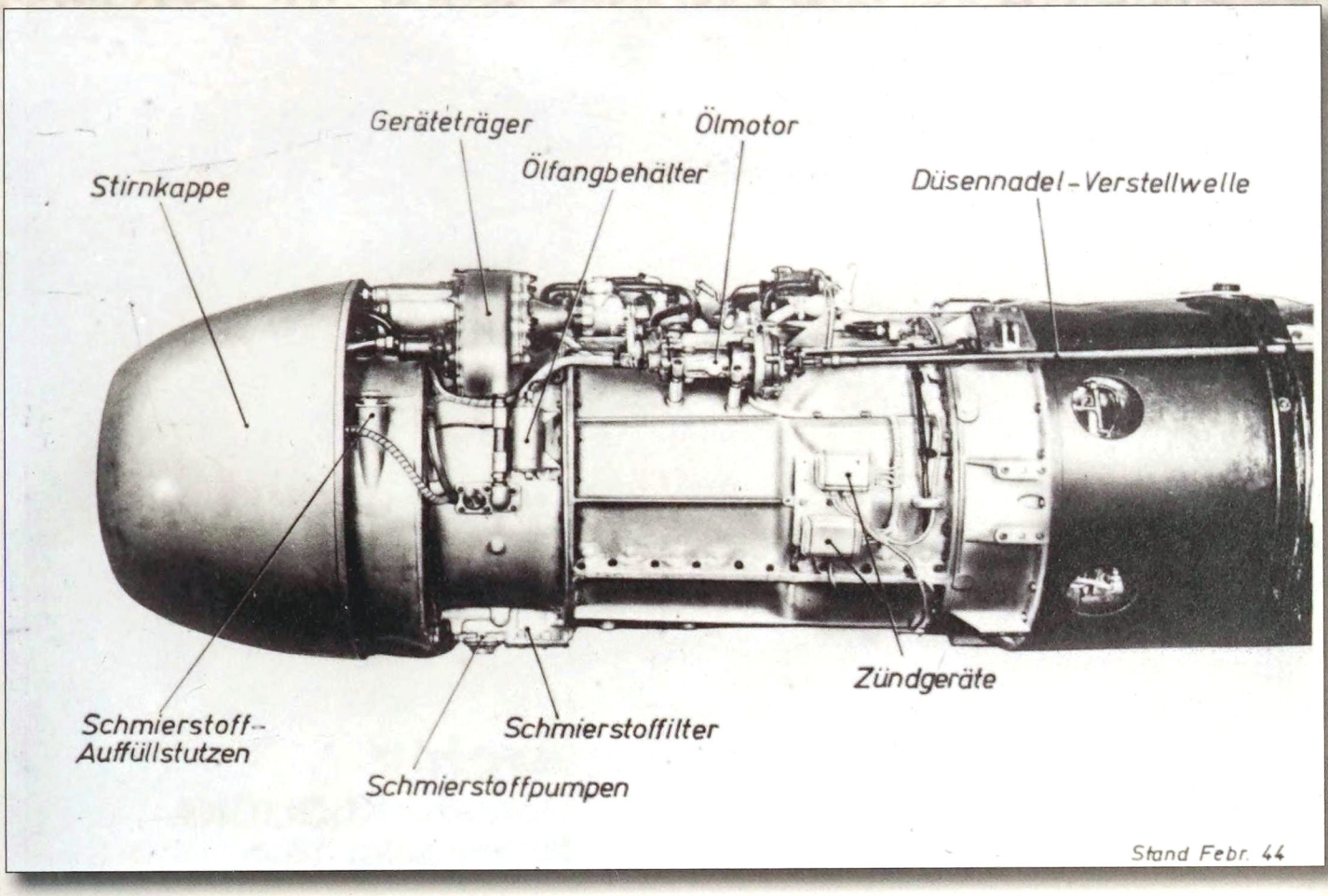
Right: *Jumo 004B control instruments. Drawing from Jumo 004B Handbuch.*
1. Panel; 2. Loop; 3. Fuel double valve; 4. Equipment rack; 5. RPM encoder (meter); 6. RPM indicator; 6a. RPM connection; 7. Measuring point for thrust nozzle pressure; 7a. Connection 8. Measuring point for pressure before compressor; 8.a Connection; 9. Measuring point for exhaust gas temperature; 9a. Connection; 10. Measuring point for fuel enjection pressure; 10a. Connection 11. Measuring point for lubricant pressure; 11a. Connection; 12. Suspension; 13. Nozzle cone adjusting.

Two photos of the Jumo 004B engine with covers removed. Engine was displayed in Cosford museum in early 90s.
(Both R. Pęczkowski)

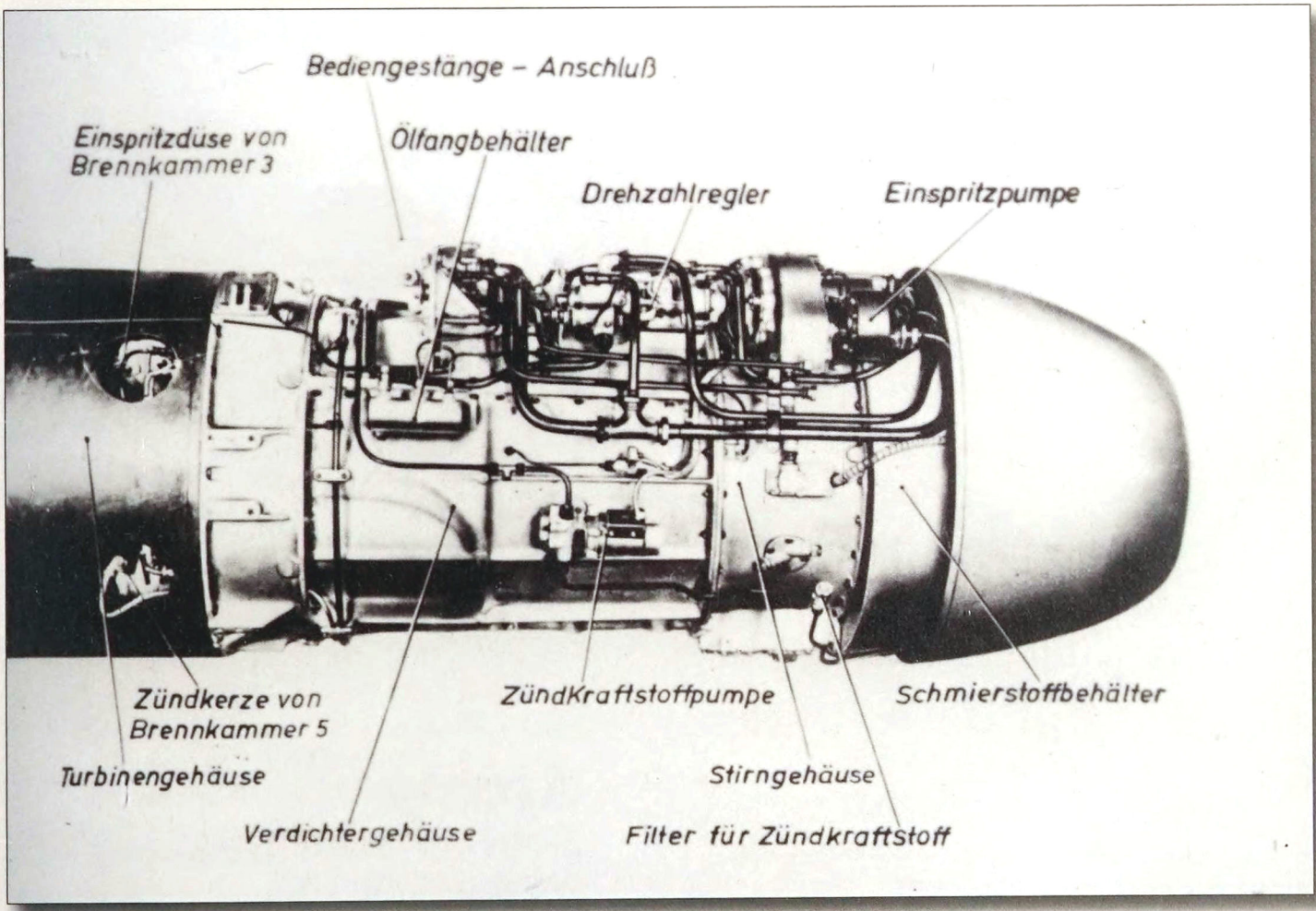


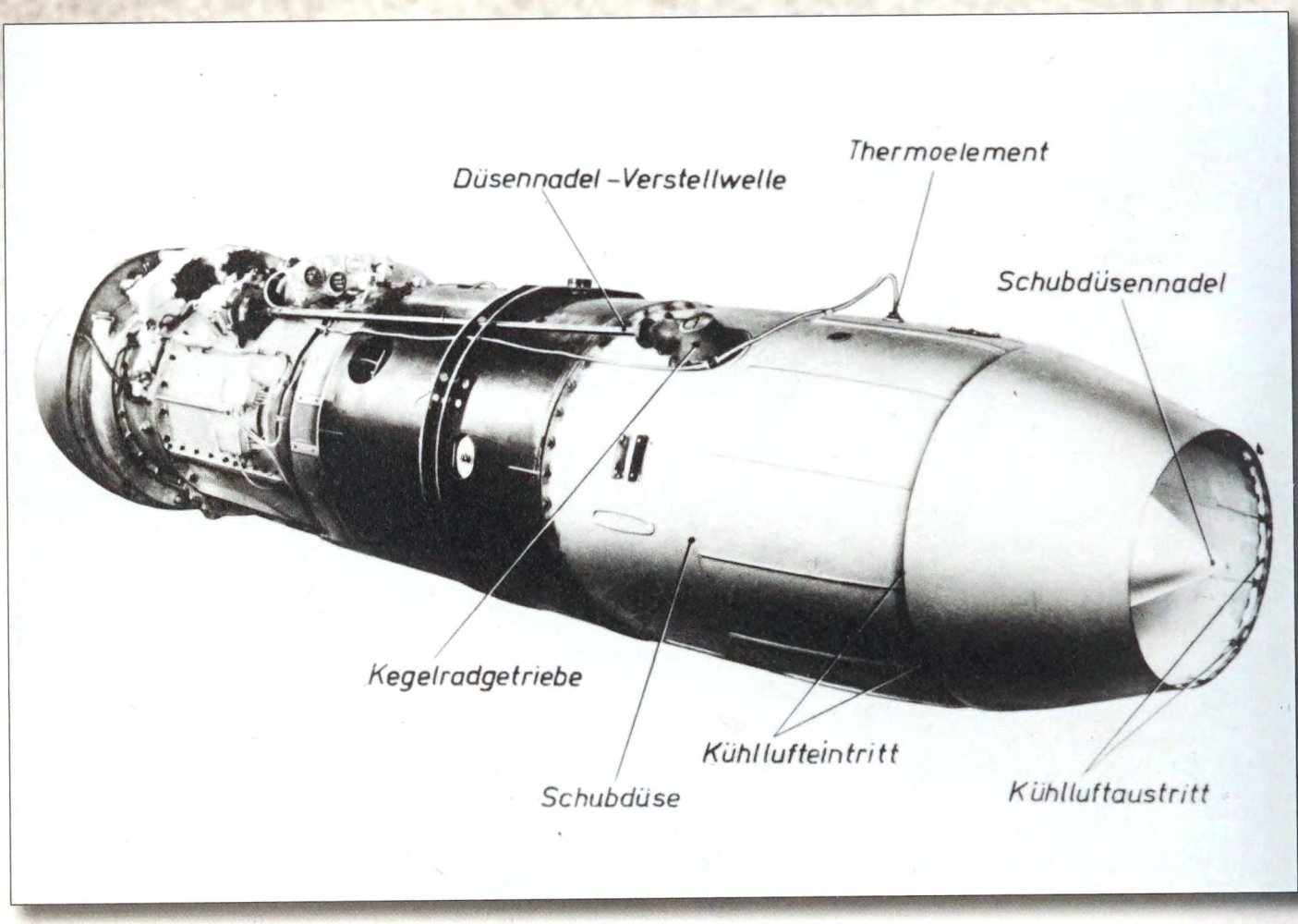


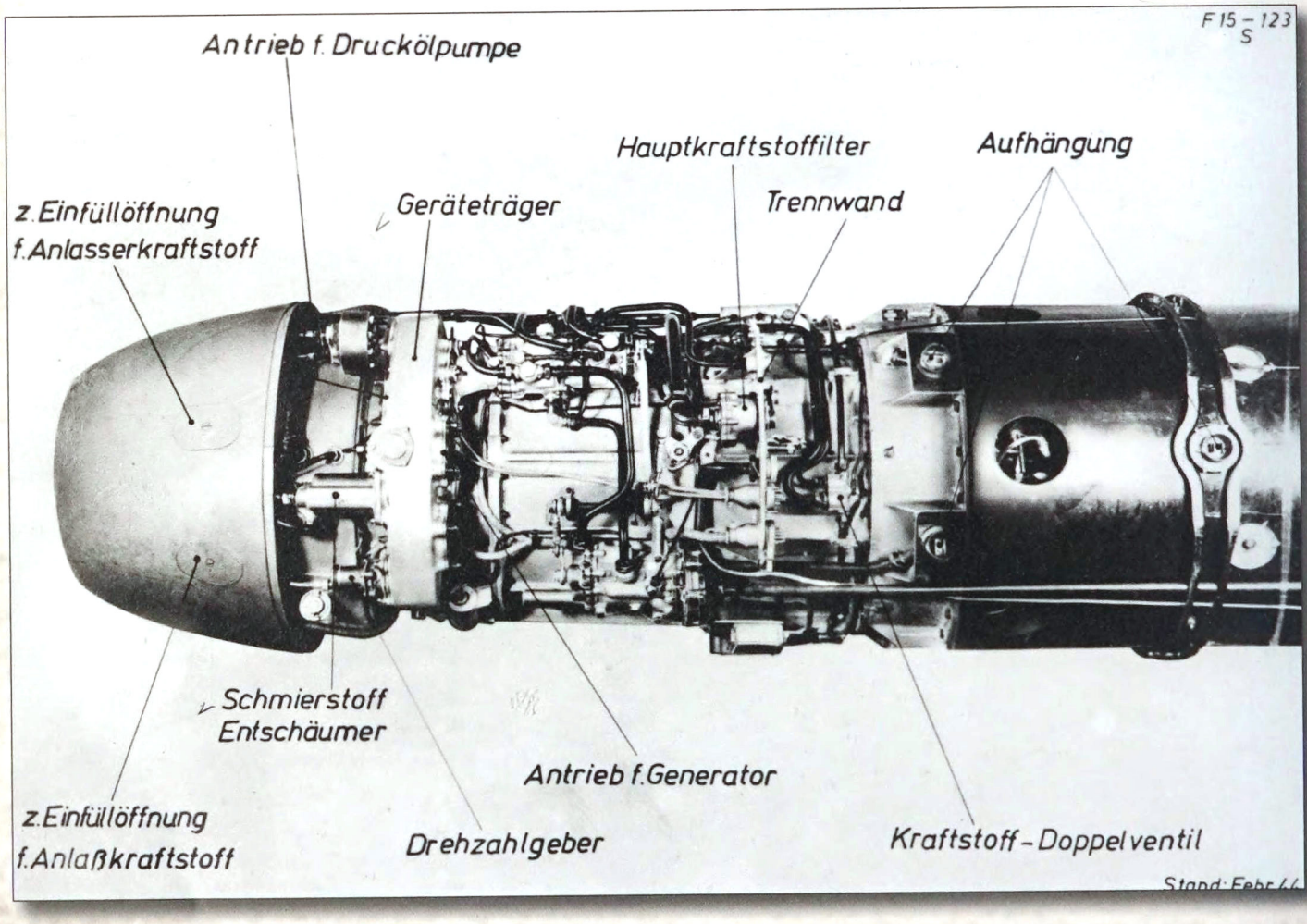
Cut-away display of a Jumo 004B engine in the Aviation Museum in Prague. Engine was mounted in S-92 aircraft.
(R. Pęczkowski)

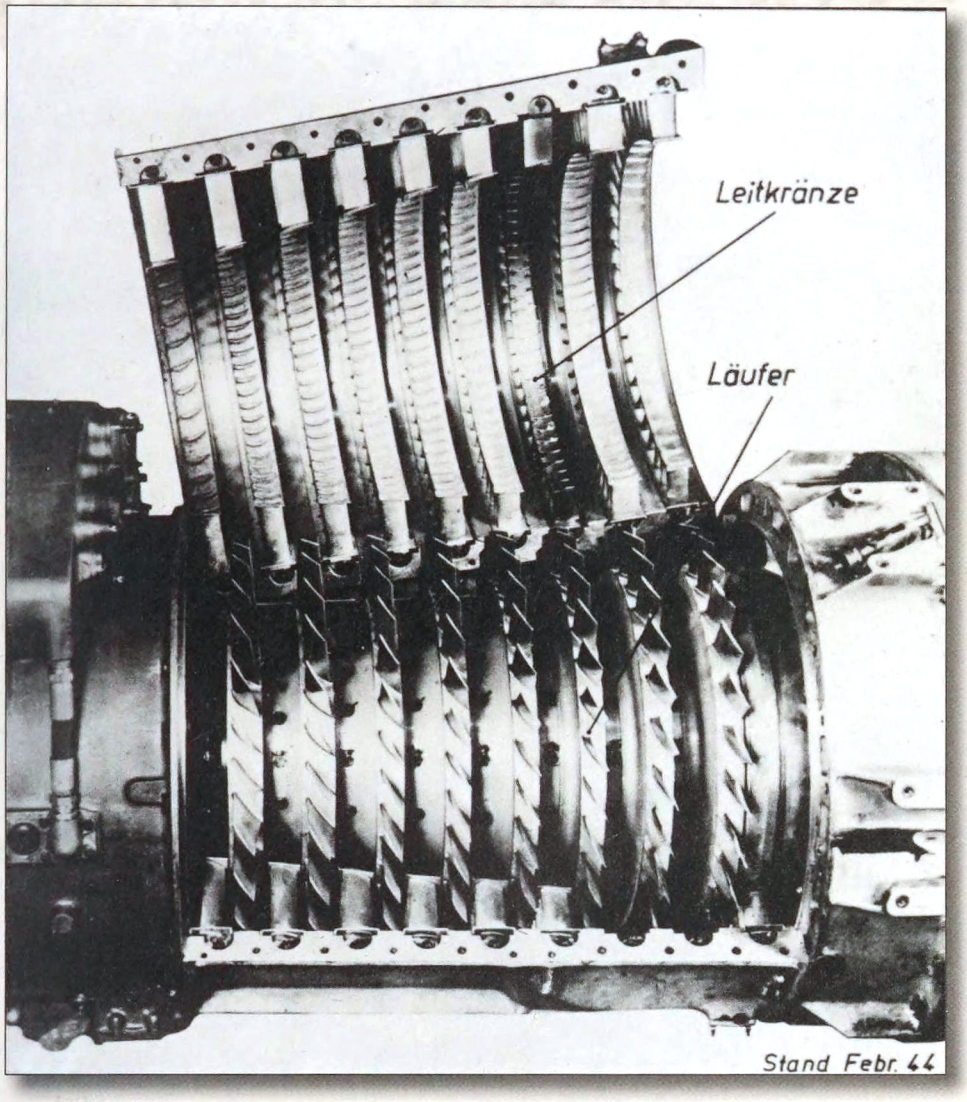


Two photos from Jumo 004B Handbuch showing engine details.




Düsennadel – Verstellwelle
Thermoelement
Schubdüsennadel
Kegelradgetriebe
Kühlluftеintritt
Schubdüse
Kühlluftaustritt

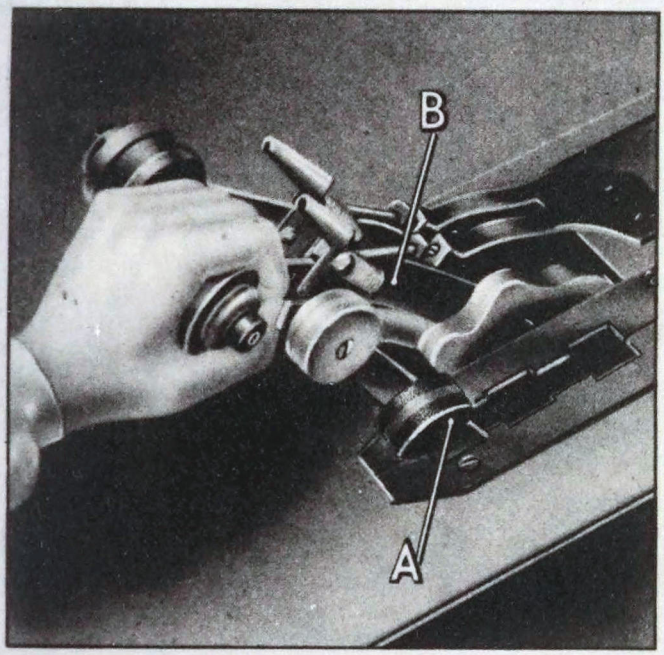

F 15 – 123 S
Antrieb f. Drucköl pumpe
Hauptkraftstoffilter
Aufhängung
z. Einfüllöffnung f. Anlasserkraftstoff
Geräteträger
Trennwand
Schmierstoff Entschäumer
Antrieb f. Generator
z. Einfüllöffnung f. Anlaßkraftstoff
Drehzahlgeber
Kraftstoff – Doppelventil
Stand: Febr. 44



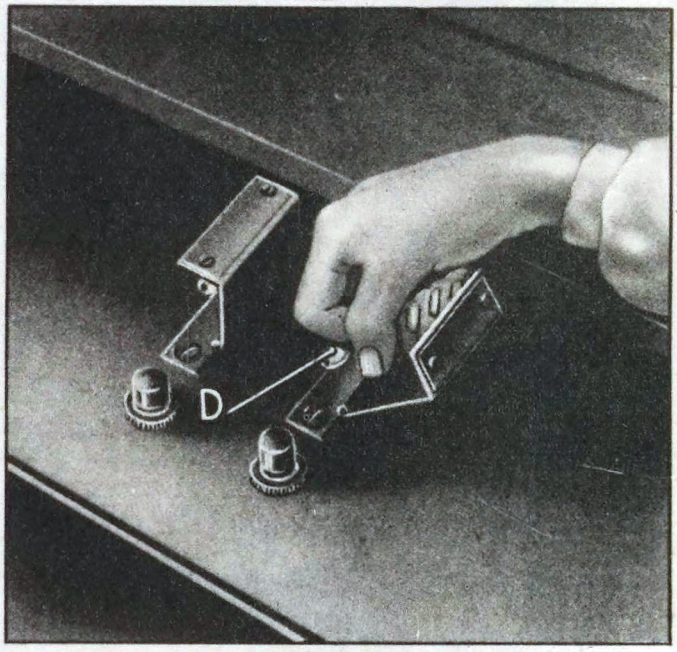
Opposite page:
Jumo 004B engine details.

Left: Jumo 004B compressor details.
Compressor has 6 stages

Bottom:
Two photos of the Jumo 004B controls:
Left hand controls – left photo:
A – Cock
B – Operating lever
Right hand controls – right photo.
D – Starter switch.



Linke Hand
Brandhahn (A) zu
Bedienhebel (B) auf „Stopp"



Rechte Hand
Anlaßschalter (D) 3—5 Sek. drücken

Undercarriage

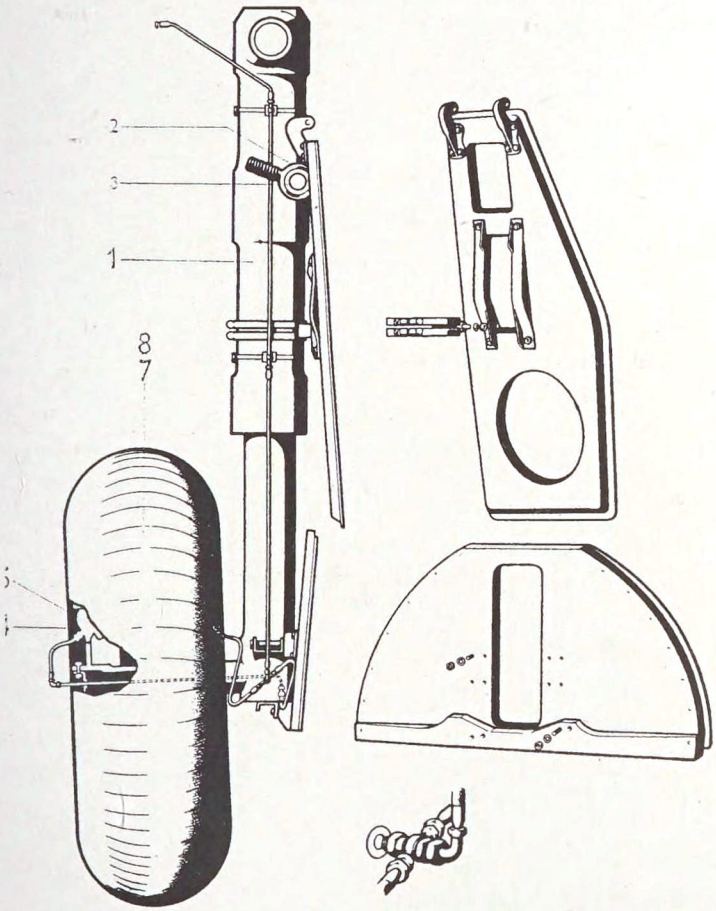
Above: Me 262 undercarriage arrangement. (D. Karnas)

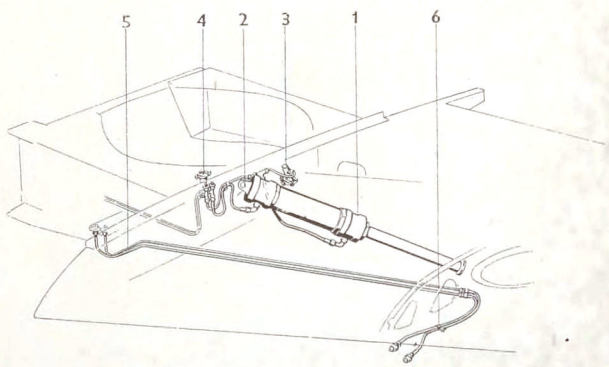
Left: Main, starboard undercarriage leg and wheel, rear view. The oleo scissors are visible. Tire has hexagonal tread blocks. (R. Pęczkowski)

Above: *Two photos of the main leg. Details of the cover are visible. Cover consisted of an upper and lower segment. The pneumatic brake pipe leads from wheel shaft into the brake caliper.*

Left: *Main leg components. Details of the cover and attachements.*

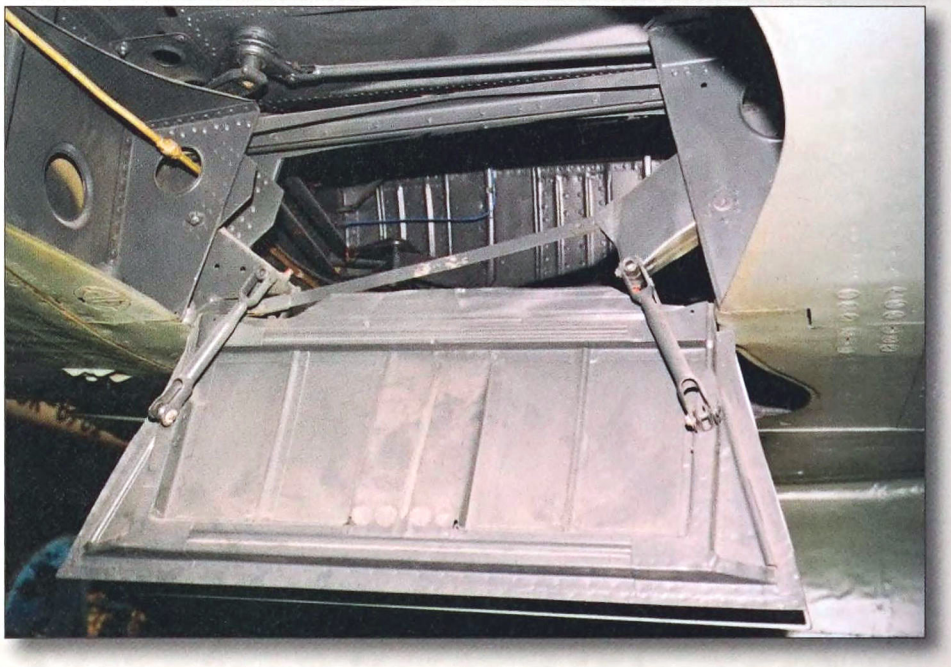
Bottom: *The retraction cylinder of the main leg installation. (Drawings from Ersatzteil-Liste Me 262)*



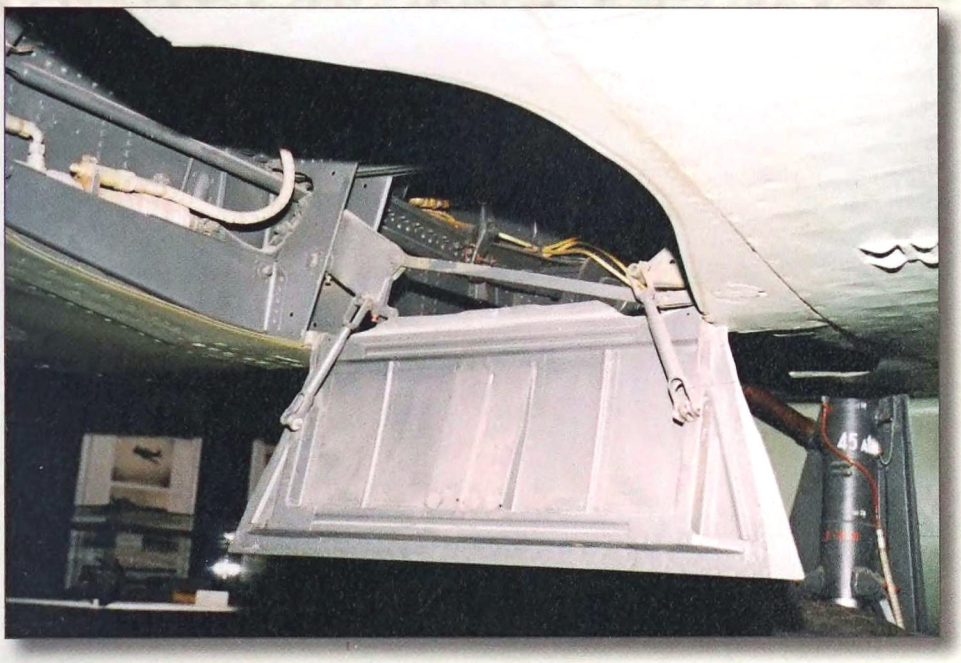


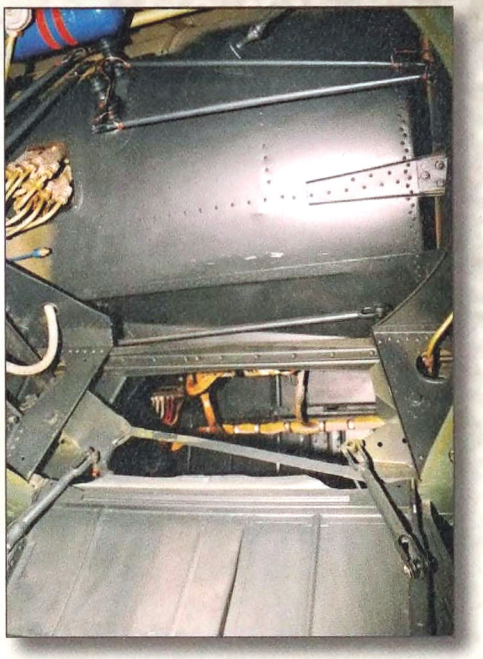
Main wheel outer view.

Main wheel wells. Retraction actuator hydraulic cylinder is also visible. The blue bottle is compressed air for the emergency undercarriage release system.



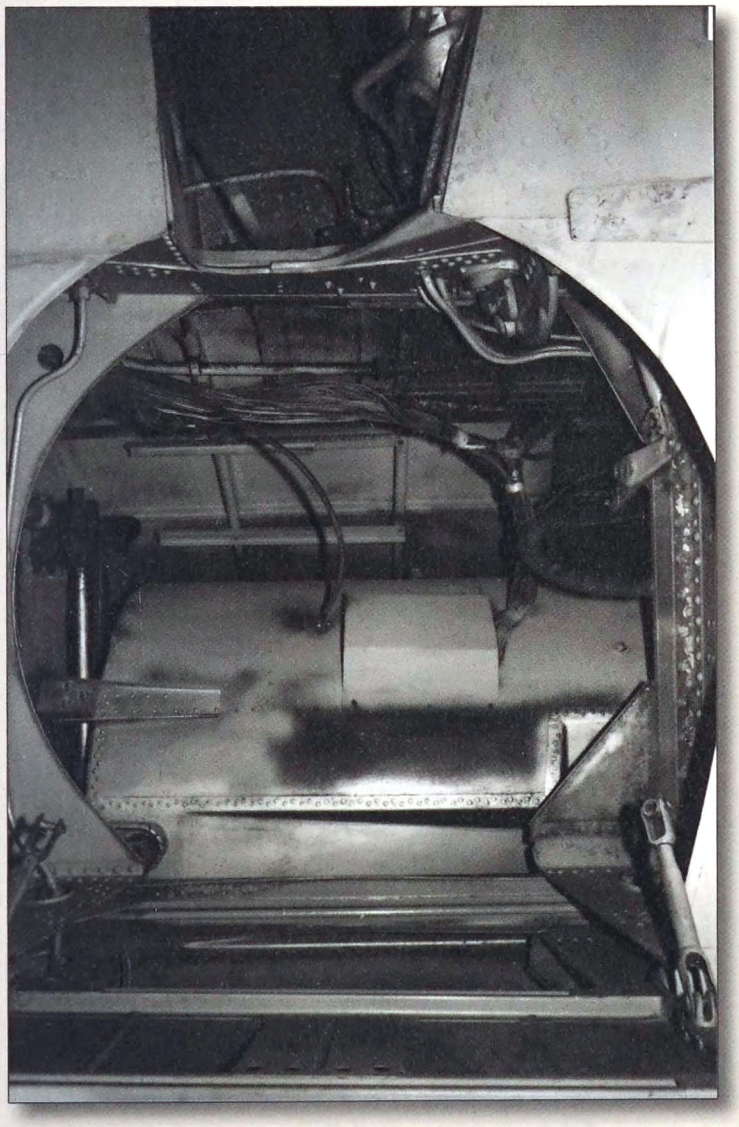
The main wheel inner door. The doors are released and retracted mechanically. (All photos of S-92 by R. Pęczkowski)



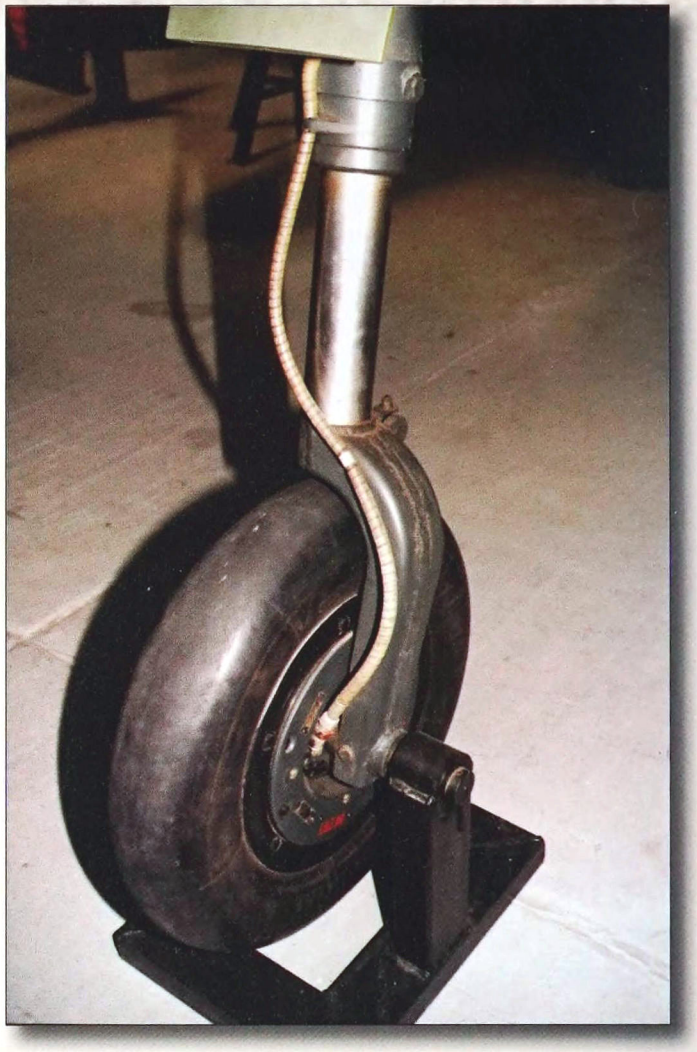


Two photos of main wheel well showing details. (R. Pęczkowski)

Bottom, left: *Details of the main wheel well. Cockpit bathtub is also visible. (A. Lochte)*



Below: *Main undercarriage leg of the Me 262 preserved in Washington DC. (R. Pęczkowski)*

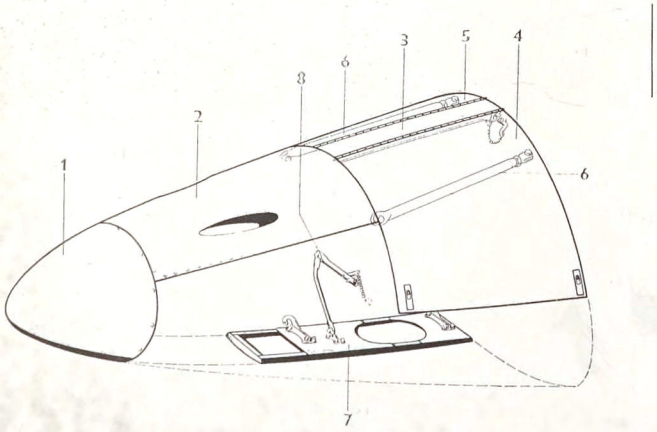


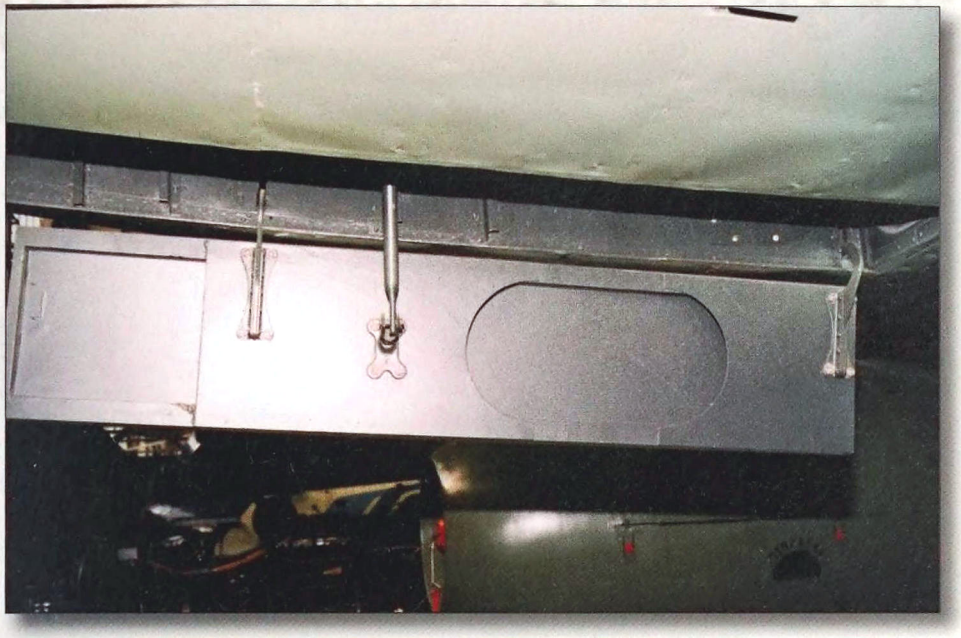
Above, left: *Nose wheel of the Me 262 in Hendon. (D. Karnas)*

Above, right: *Port side of the nose wheel. Me 262 nose wheel was in fact a main wheel of the Bf 109 G-10. Brake pipe is visible. (R. Pęczkowski)*

Right: *Looking aft of the nose wheel well. The actuacting cylinder is attached to the port side of the main leg. (R. Pęczkowski)*

Bottom: *Drawing from Ersatzteil-Liste Me 262 showing nose covers and wheel door.*

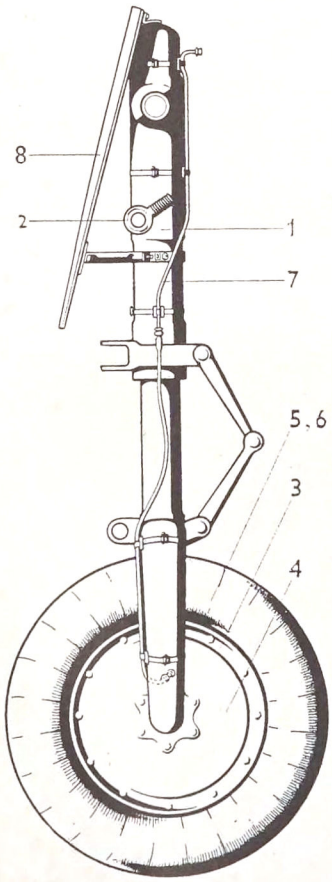




Nose wheel door details of S-92.
(R. Pęczkowski)

Left: *Port side of the nose wheel.*

Bottom, right: *Nose wheel, starboard side.*
(Both R. Pęczkowski)

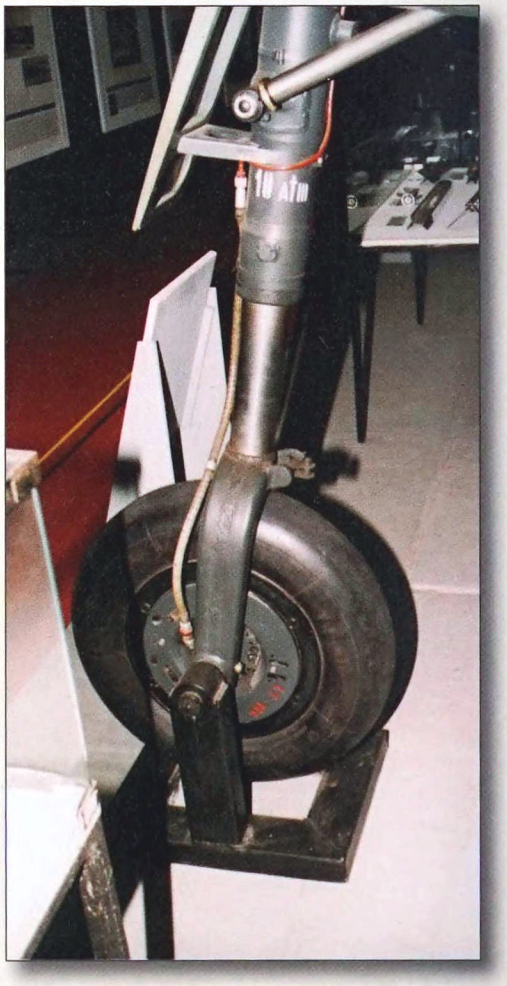


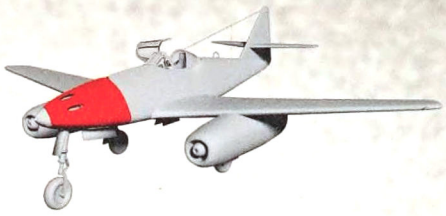
Above, left: *Front view of the nose and nose wheel. Nose front door usually carried stensil* "Achtung! Nicht am Bugrad schleppen!" – "*Caution! Do not tow nose wheel*".

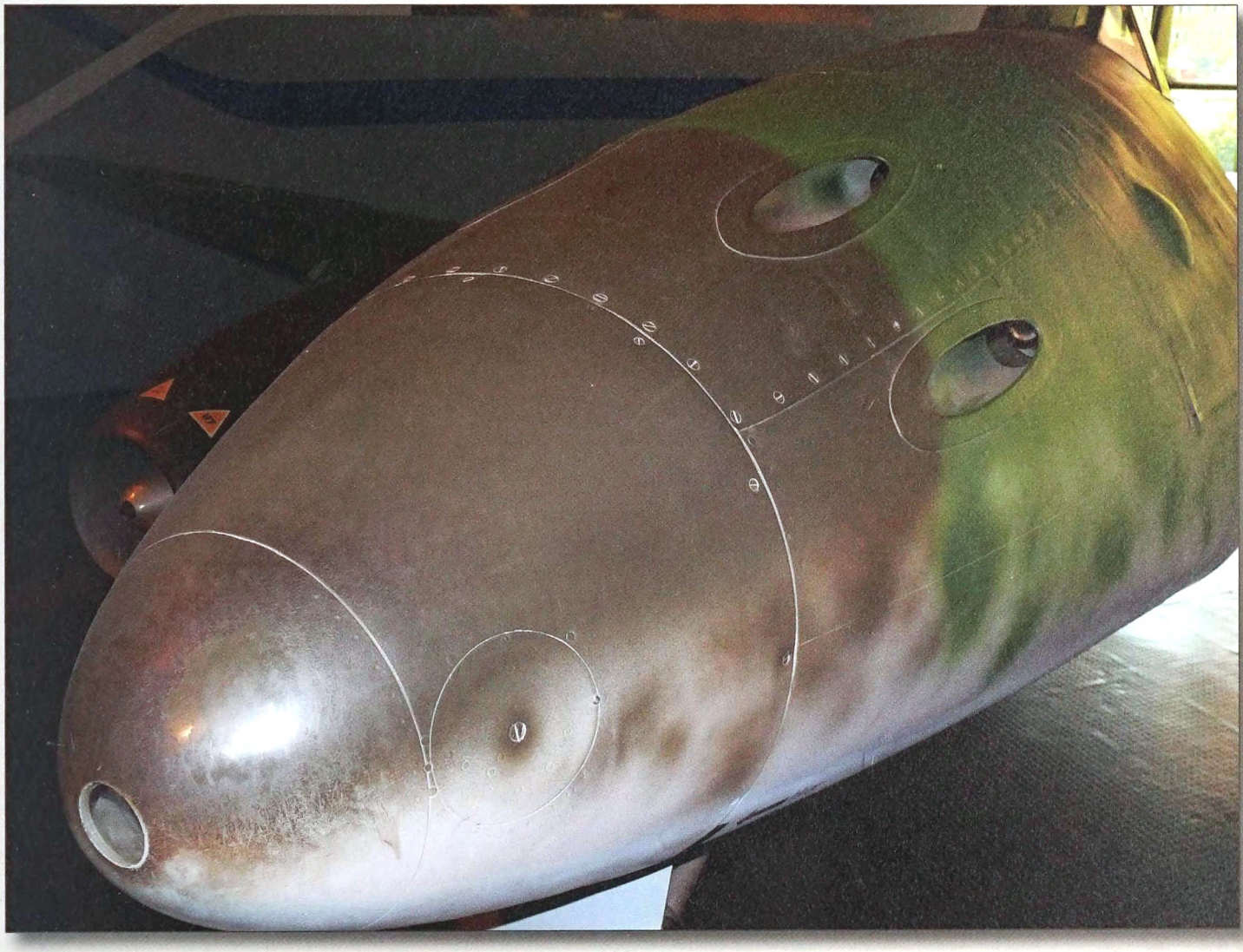
Above, right: *Nose wheel details. Me 262 preserved in Washington. (R. Pęczkowski)*

Left: *Ersatzteil-Liste Me 262 drawing showing nose wheel arrangement.*

Right: *Port side of the nose wheel and oleo strut. (R. Pęczkowski)*



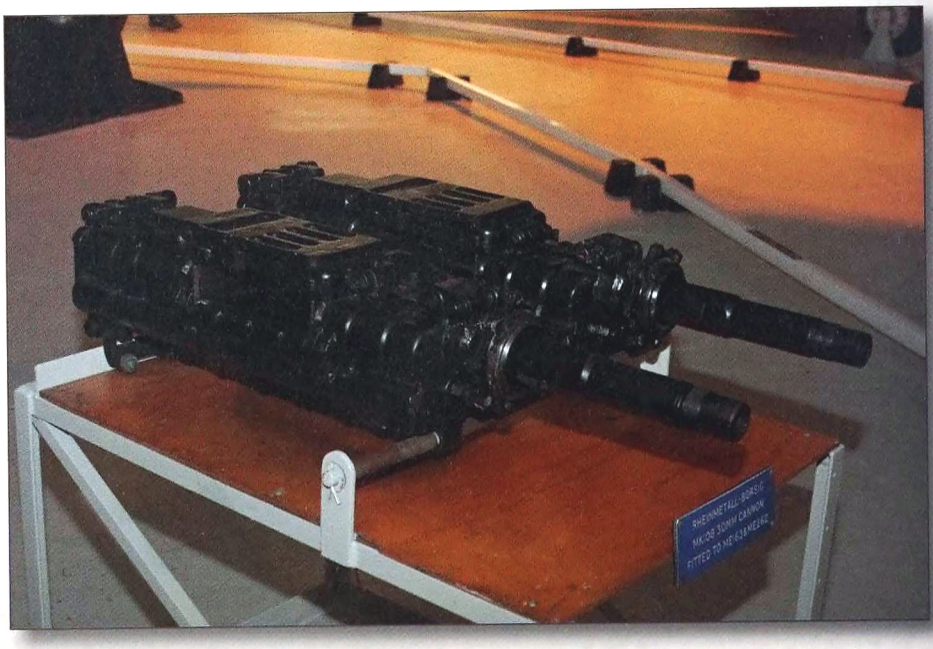




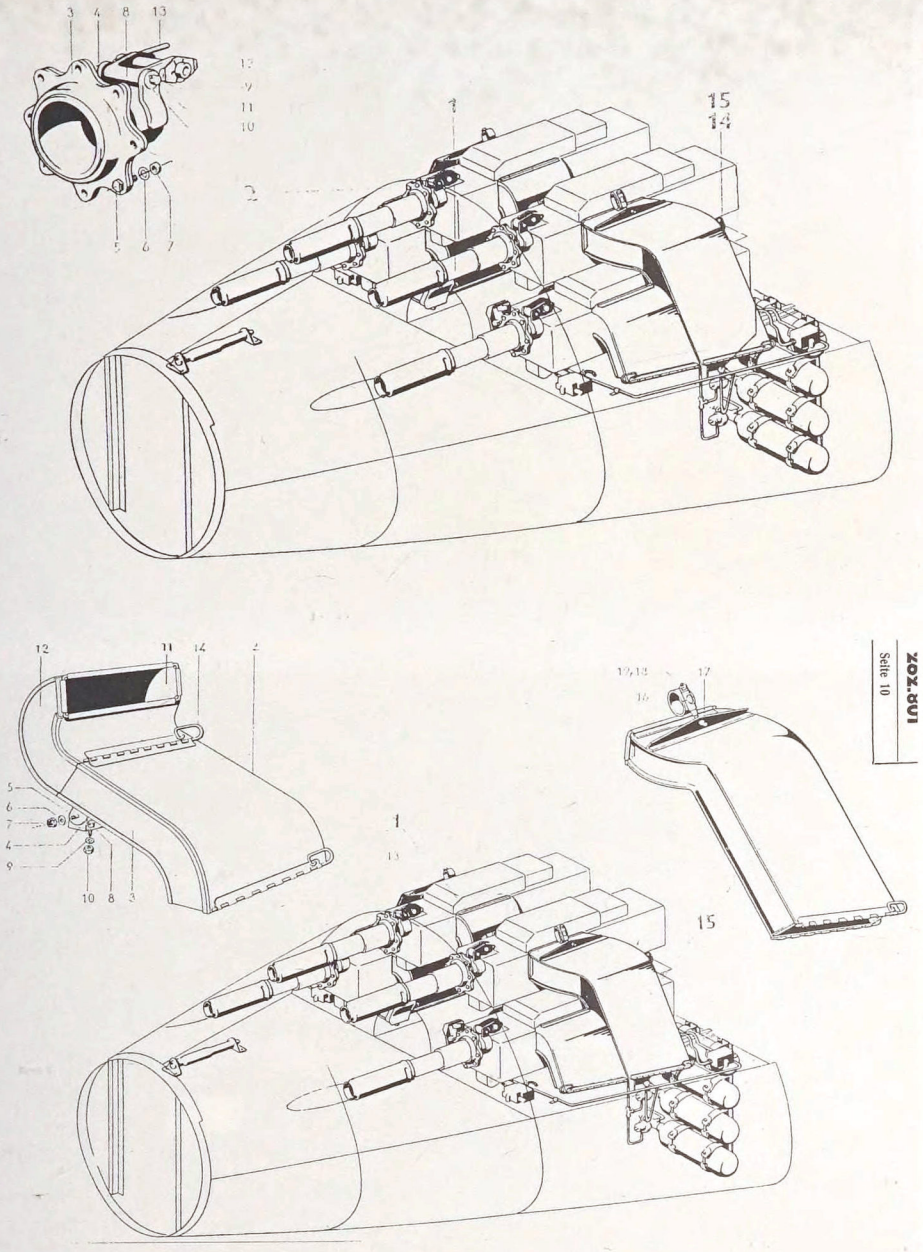
Above: *Me 262 A nose details. Te gun camera (BSK-16) aperture is visible at the very tip of the fuselage. Gun camera is not installed. Note gun camera access panel, port side only. Port blast tubes are also visible. (A. Juszczak)*

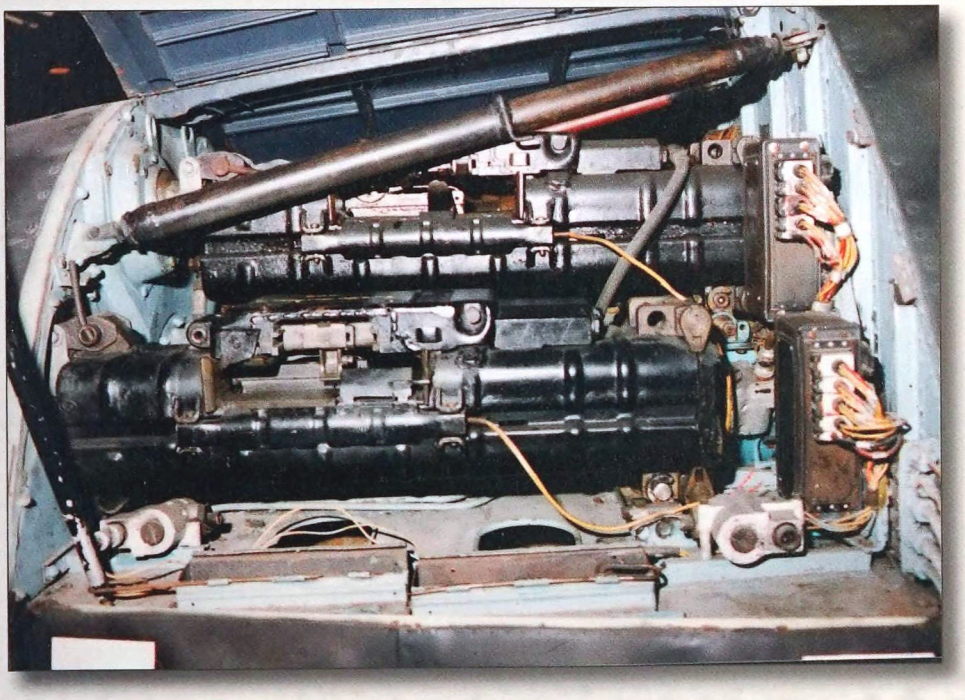
Right: *Detail shot of the blast tubes – cannons are not mounted. (M. Bronkowski)*

Three photos of Rheinmetall-Borsig MK-108, 30mm cannons. (all R. Pęczkowski)



Two drawings from Ersatzteil-Liste Me 262 showing gun bay details.



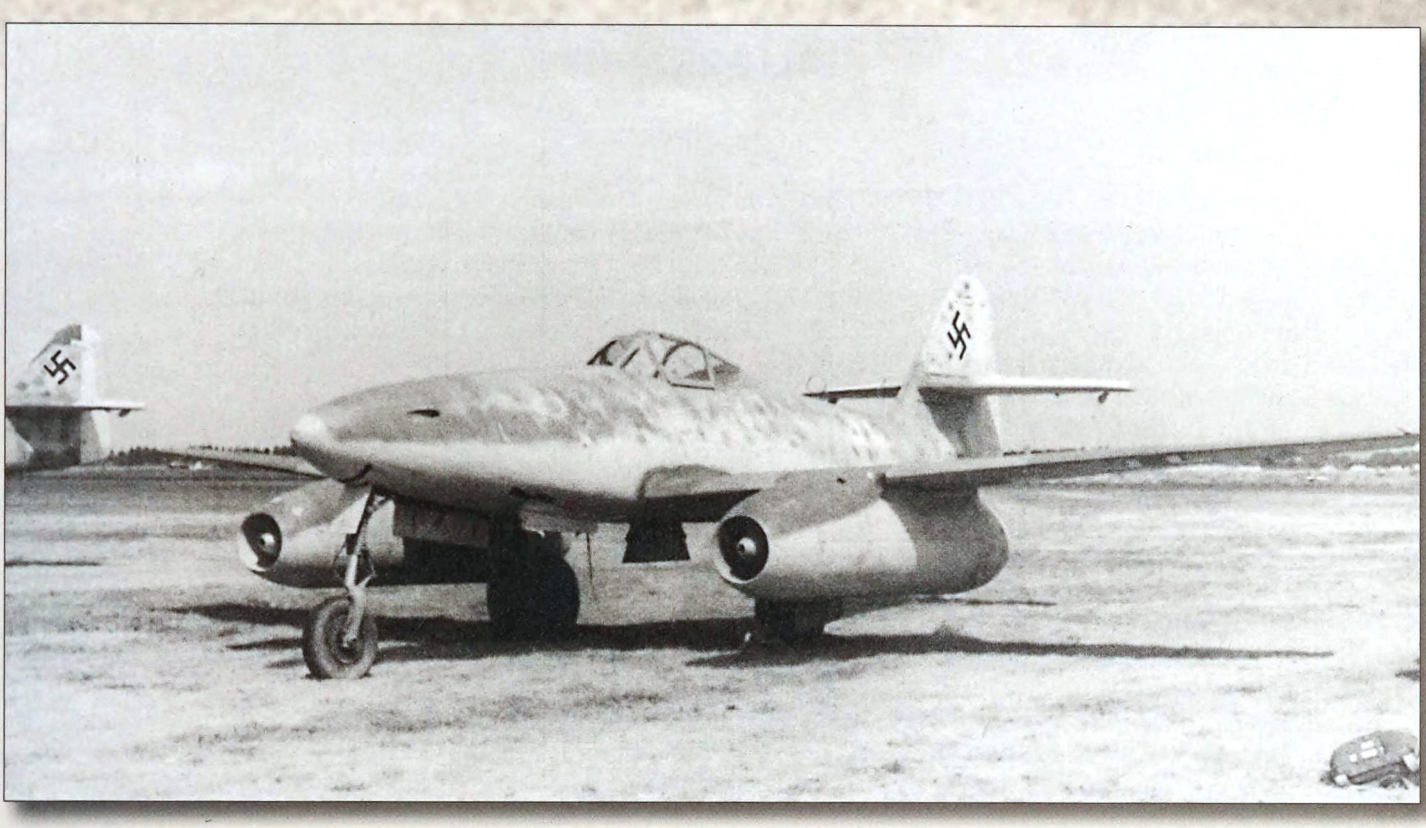


Port side gun bay details with cannons installed. The large tube is an additional structural support. Me 262 preserved in Cosford Museum, early '90s. (M. Bronkowski)

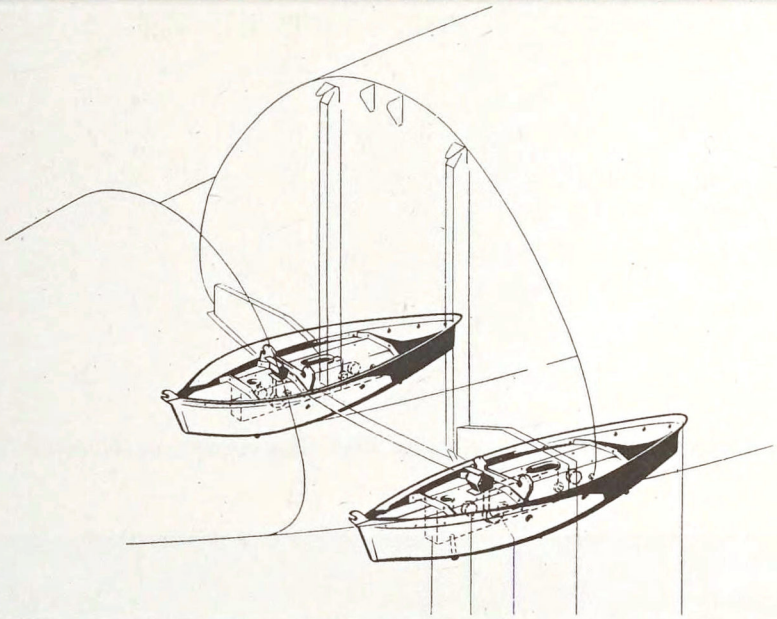
Port gun bay looking forward. (R. Pęczkowski)

Port gun bay. Both photos of Me 262 A preserved in Cosford Museum, early 90s. (M. Bronkowski)

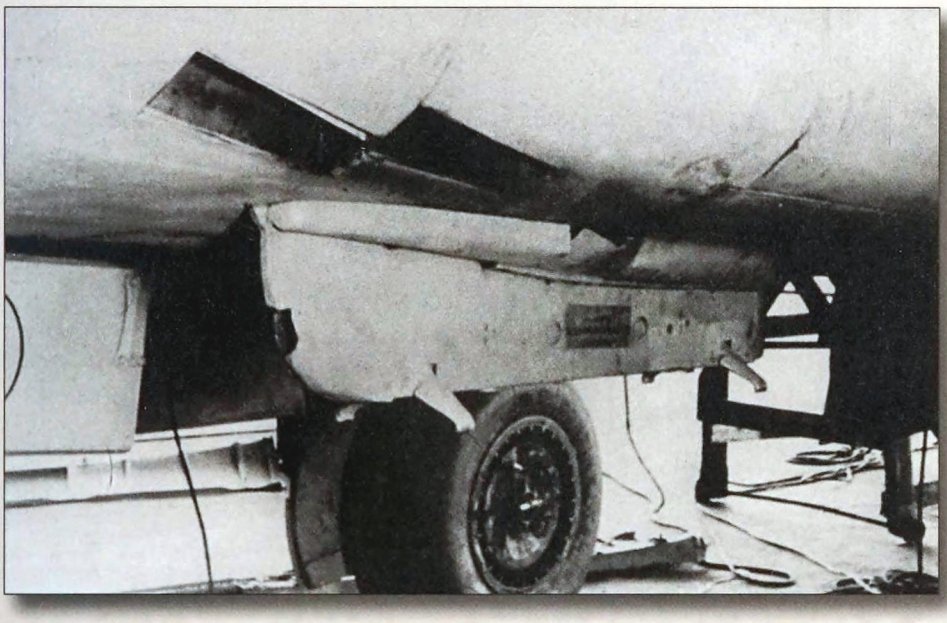
Two, port side, shell ejection ports. Even the Me 262 A-2a fighter bomber versions had shell ejection ports. (R. Pęczkowski)



Me 262 A-2a with two upper cannon blast tubes with covers and bomb racks installed. (US National Archives)



Ersatzteil-Liste Me 262 drawing showing Wikingerschiff *bomb racks mounted under the central fuselage.*



ETC 504 bomb rack mounted under the Me 262 A-2a fuselage. (Stratus coll.)

BIBLIOGRAPHY

Books (selected)

Baker D., *Messerchmitt Me 262*, ISBN: 1861260784, The Crowood Press Ltd., Marlborough, 1997

Creek, E.J. and Smith J. R., *Me 262 Volume One*, ISBN: 0952686724, Classic Publications, Burgess Hill, 1997

Creek, E.J. and Smith J. R., *Me 262 Volume Two*, ISBN: 0952686732, Classic Publications, Burgess Hill, 1998

Creek, E.J. and Smith J. R., *Me 262 Volume Three*, ISBN: 1903223008, Classic Publications, Crowborough, 2000

Creek, E.J. and Smith J. R., *Me 262 Volume Four*, ISBN: 1903223040, Classic Publications, Crowborough, 2000

Fleischer S. and Ryś M., *Me 262 Schwalbe cz. 1*, ISBN: 837271350, AJ-Press, Gdynia, 2003

Fleischer S. and Ryś M., *Me 262 Schwalbe cz. 2*, ISBN: 837271393, AJ-Press, Gdynia, 2004

Foster J. Jr., *Design Analysis of Me-262 Jet Fighter*, Aviation,

Griehl M., *The Luftwaffe Profile Series No. 1*, ISBN: 0887408206, Schiffer Publishing Ltd., Atglen PA, 1995

Griehl M., *German Jets 1944–1945*, ISBN: 1853673560, Greenhill Books, London, 1999

Griehl M., Flugzeug Profile 47 Me 262 Varianten, UNITEC-Medienvertrieb, 2009

Hecht H., *Das Waffen-Arsenal Band 55*, ISBN: 3790901067, Pdzun-Pallas-Verlag, Friedberg,

Hildebrandt C., *Broken Eagles 4 Me 262A*, Fighter Pictorial, Perkiomenville, PA,

Jenkins D. R., *Warbird Tech Series Vol. 6 Me 262*, ISBN: 0933424698, Specialty Press, North Branch, MN, 1996

Merrick K. A., *German Aircraft Interrios 1935–1945 Vol. 1*, ISBN: 0914144413, Monogram Aviation Publications, Sturbridge, MA 1996

Morgan H. and Weal J., *German Jet Aces of WWII*, ISBN: 1855326345, Osprey Publishing Ltd., London, 1998

Schmoll P., Nest of Eagles, ISBN: 9781906537128; Chevron Publishing Limited; Hersham, 2004

Stapfer H-H., *Walk Around Messerschmitt Me 262*, ISBN: 0897475003, Squadron Signal Publications, Carrollton, TX, 2003

Ersatzteil-Liste Me 262, Augsburg, 1943

Ersatzteil-Liste Me 262, Augsburg, 1944

Knuppelgriff KG 12 Handbuch, Berlin, 1940

Gerateliste (AG-Liste) Me 262 A, Berlin, 1944

Jumo 004B Handbuch, Berlin, 1944

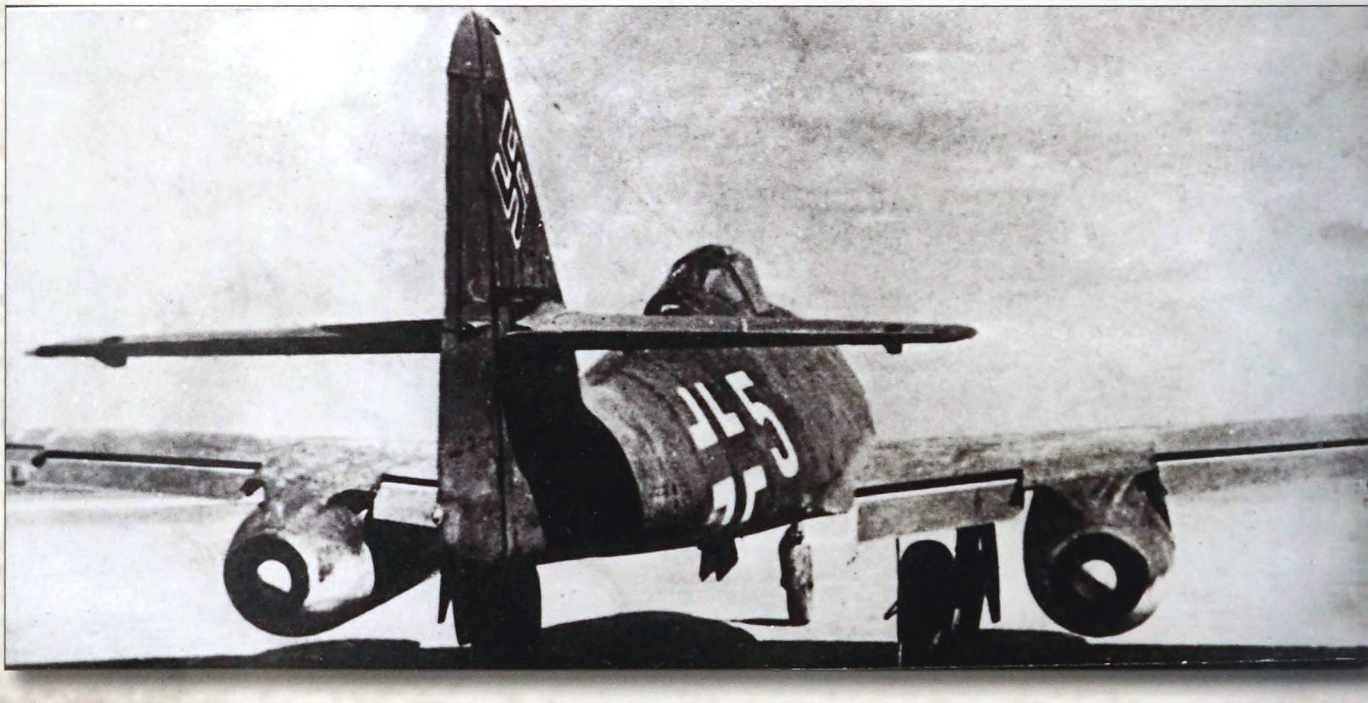
Me 262 A-1 Bediennungsvorschrift-FI, Berlin, 1944

Me 262 A-1 Pilot's Handbook, US Air Force, Dayton, OH, 1946

Famous Aerplanes of the World No. 2, Bunrin-DO, 1987

Revi 16B Refelxvisier 16B Waffen Handbuch,Berlin 1943

Me 262 A-1a W.Nr. 110007 of 11./JG7 captured by British troops at Fassberg on 8 May 1945. This aircraft was subsequently flown RAF markings. (A. Lochte coll.)



An illustrated history of the evolution of the Me 262 A version of most famous World War Two jet fighter aircraft: * How the Me 262 A changed during production from * How to recognize the different versions * Profusely illustrated with photos, including a comprehensive walk-around section showing all aspects of the airframe, and diagrams from official manuals. Includes 1/72nd plans, and colour profiles showing many of the colorful schemes applied to the Me 262 by its users.

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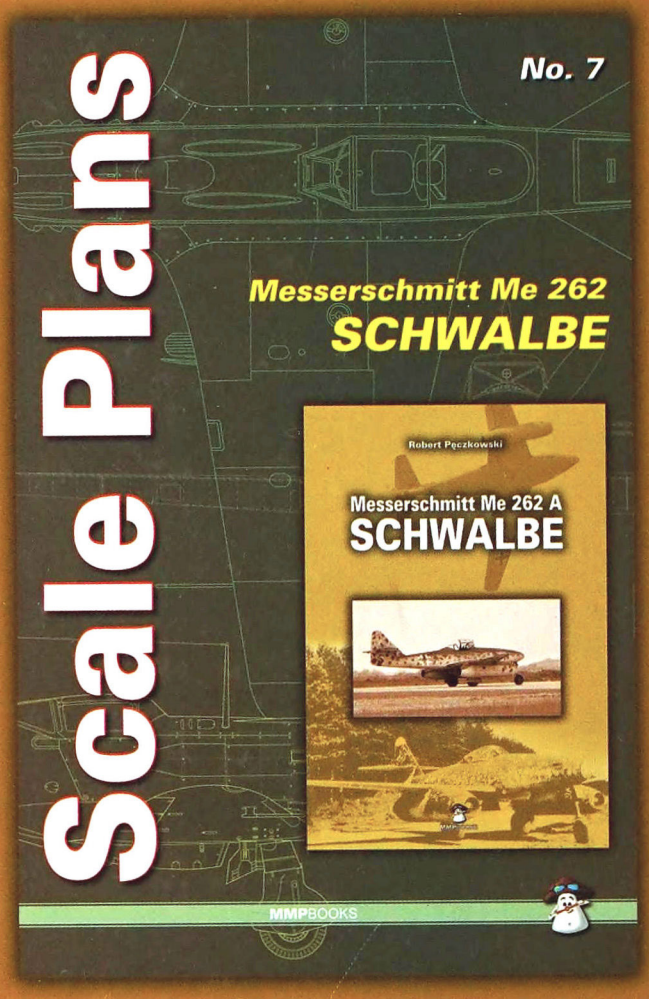

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